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ADDRESS IN STATE MEDICINE

RECENT ADVANCES IN PREVENTIVE MEDICINE.

BY GEORGE H ROHÉ, M D

OF BALTIMORE, MARYLAND

Delivered before the Section on State Medicine of the Thirty-eighth Annual Meeting of the American Medical Association held at Chicago, June 7-10, 1887

Progress in any branch of science or art may be measured in two ways by the number and character of new discoveries made or by the gradual advances in the application of knowledge previously acquired Judged by either of these criteria the record of the past year is a creditable one to the comparatively newly cultivated field of State Medicine In the brief time at my command, I shall endeavor to sketch concisely, and in outline merely, what has been accomplished during the year in this domain

EPIDEMIOLOGY AND ENDEMIOLOGY

Adverting first to the extension of the fifth great pandemic of *Asiatic cholera*, which began in 1883, it will be seen that the danger of an invasion of this country has not yet passed, but that, on the contrary, it is greater than at any time within the last three years Both in 1886 and in the present year the disease has continued in Southeastern Italy, and in the Austrian dominions at the head of the Adriatic

In Japan the epidemic began in the summer of 1885, and after a period of cessation during the winter recurred in 1886 In the latter year there were 154,373 cases, with 101,695 deaths

In November, 1886, cholera was carried to South America, in an Italian ship, the "Perseo," bound from Genoa to Buenos Ayres The disease rapidly spread in the Argentine Republic, and crossing the Andean range invaded the Pacific coast of the South American continent

If the present geographical distribution of cholera be taken in view, it will be seen that the United States are threatened by an invasion of this disease from three sources, first, from Europe, by way of the Atlantic ocean, second, from Japan by way of the Pacific ocean, third, from the west coast of South America by way of the Pacific ocean, or by way of Mexico and our Southern border The Isthmus of Panama and the South Atlantic transportation lines may also act as gateways to the infection The present apparent lull in the activity of the disease should not tempt health authorities to relax their vigilance or neglect the precautions inculcated by sanitary science

The investigations into the etiology of cholera have proceeded on the lines marked out by Koch, in his Egyptian and Indian researches The conclusions arrived at by Dr Shakespeare, who was sent to Spain to study the disease, by the United States Government, are that the discovery of the cholera spirillum by Koch places in the hands of the profession an infallible means of diagnosis Dr Shakespeare does not commit himself to the view that the spirillum is the absolute cause of the disease The general tendency among bacteriologists is, to accept the views of Dr Koch, both in regard to the infective agent, and to the medium through which the infection gains entrance to the body, namely, contaminated food and drink Pettenkofer, however, though admitting the agency of the spirillum, still maintains the necessity of certain local and temporary conditions of soil, more particularly in relation to the movements of the ground water, in order to produce an outbreak It may be stated casually that Dr. Shakespeare reports that the results of Señor Ferrán's inoculations were more favorable than the profession were led to believe at the time they created so great a sensation

Yellow Fever appeared within the limits of the United States at only one place during the year, namely, at Biloxi, a summer resort on the Gulf coast of Mississippi The proximity of Biloxi to Ship Island, the national quarantine station, probably accounts for the appearance of the fever at the former place Prompt enforcement of sanitary measures, such as isolation of patients and disinfection of surroundings soon put an end to the outbreak

The claims of Drs Domingos Freire, of Brazil, and Carmona, of Mexico, concerning protective inoculation against yellow fever have been reiterated during the year The latest information upon this important subject available comes in the shape of a dispatch from the United States Consul at Maracaibo, Venezuela, who reports under date of March 7, 1887, that Dr Bustamente of Cucuta, Columbia, had practised inoculation with success The following quotation is from Dr Bustamente's letter "For the present I will confine myself to the statement that in more than forty persons whom I have inoculated, a fever, with many of the characteristic symptoms of yellow fever, has presented itself This fever developed by inoculation, varying several tenths of a degree, and in some cases ascending to 41° C (105 5° Fahr) but never presenting the most grave symptoms of yellow fever The result of my observations permits

me to state positively that the fever produced by inoculation is attended with no danger, and it is safe to inoculate, as I have already done, from children two years of age to the oldest individuals Many of the persons inoculated have come to this city, and in no case has the yellow fever attacked them which gives me hope of a final result completely satisfactory " Dr Bustamente also states that the municipality of Cucuta, assisted by private enterprise, has dispatched a commission, composed of two physicians, to Mexico to study the inoculation of the fever

In Brazil and Mexico the inoculations are said to amount to many thousands and complete success is claimed by Freire and Carmona and their partisans Others have, however, expressed grave doubts of the accuracy of the observations published The last Congress, recognizing the importance of a solution of this question to the people of the United States, authorized the appointment of a commission to proceed to South America and Mexico and thoroughly investigate the validity of the claims of Drs Freire and Carmona President Cleveland, with the good sense characteristic of him when dealing with scientific interests has appointed Major George M Sternberg, Surgeon U S Army, as the Commissioner to perform this duty The profession and the public may look forward with confidence to a thorough and unprejudiced investigation of the claims of Freire and Carmona Dr Sternberg sailed for Brazil on May 4, to begin his researches at the home of Dr Freire

Limited outbreaks of *small pox* occurred during the year in New York city and Brooklyn and at Los Angeles in Southern California At the latter point the disease was introduced from Mexico At present the epidemic seems to be well under control by the State Board of Health and local sanitary authorities

In this connection, reference may be made to the discussion recently re opened by Dr Fleming, the distinguished English Veterinarian seconded by the accomplished editor of the *New York Medical Journal* (Dr Frank P Foster), on the doctrine of identity of human variola and cowpox Dr Fleming believes he has shown the doctrine to be a fallacy, and in this view is strongly supported by Dr Foster According to Dr Foster, the supposed vaccinations of over three thousand persons with the virus of variolated cows, and its successive humanized cultures, made by Ceely and Badcock, of England, Adams, of Massachusetts, and Knight, of Baltimore, were merely inoculations of variolous matter which had not undergone any modification in consequence of its transmission through the bovine subject This is equivalent to saying that experienced observers as those above mentioned certainly were, are unable to perceive the the clinical difference between vaccinia and inoculation-variola From such a point of view most clinical observation could be called in question No evidence whatever is on record proving that cow-pox is anything other than variola as it affects the cow Negative testimony based upon failures to inoculate small pox virus upon cows by certain observers, can have no force in face of the comparatively numerous positive results obtained by others Cumulative increase of such negative evidence does not add to its strength

The admitted dangers of humanized vaccine from syphilis and perhaps other diseases, and the many inconveniences attending the use of bovine virus—such as prolonged incubation, untrustworthy supply, etc , have stimulated endeavors to cultivate the microbe upon which the infective power of vaccine virus may reasonably be assumed to depend In an extended series of experiments recently made, Dr John Dougall, already favorably known for his accurate work in the field of bacteriology, has attempted to secure this result but without success Where pure cultures of an organism were obtained through successive generations, it was found that the infectiveness of the microbe was lost Hence, the experiments of Dougall even failed to demonstrate whether the organisms found were specific Garré, a German bacteriologist, has also quite recently investigated the subject, with more success His pure cultures were inoculable upon animals but not upon man In the vesicles resulting from the inoculations the same organisms that composed the culture were found While these results are indefinite, they encourage us to look for success in the near future

Whether the protective power of vaccination is permanent or whether it diminishes in the course of time is still occasionally the subject of discussion in sanitary publications In recent papers Wolfiberg has carefully reviewed the entire question from various points of view, and has arrived at the conclusion that the protective influence of vaccination does not diminish, but that the natural susceptibility to small-pox increases in the human subject after the fifteenth year of life Hence, re vaccination after that age is an important safeguard The inference derived from these studies of Wolfiberg would seem to be that a thorough vaccination at or after the fifteenth year is protective for life

Scarlet Fever, one of the most fatal plagues of infantile life, has attracted especial attention in connection with the startling assertion of its apparent origin from a disease occurring in cows The evidence in support of this claim is briefly as follows Mr W H Power, of the English Local Government Board, was detailed to investigate certain outbreaks of scarlet fever, which seemed to have especial relation to the milk supply from a particular dairy farm Upon inspection this dairy was found to be in excellent sanitary condition as regards cleanliness, water supply, sewerage, etc , and for a time considerable difficulty was experienced in locating the cause of the outbreaks Improbable, as it may at first sight appear, it seems to have been incontestably established, that the epidemics of scarlatina were due to the use of milk obtained from cows attacked by a peculiar disease manifested in general by a vesicular eruption followed by ulceration of the udder The chain of circumstances connecting the disease in the cows with the outbreaks of scarlet fever in certain districts in London, supplied with milk from the diseased cows, was so strongly forged by the able investigator into whose hands the work had been committed by the authorities, that no doubt can exist that the one disease owed its origin to the other

The same outbreaks were studied by the eminent pathologist, Dr Klein, from another point of view Procuring some material from the ulcerated udders of the sick cows, he cultivated a micro organism, which, when inoculated into healthy calves, produced in them lesions similar to those existing in cows from whom the material was obtained Dr Klein has found a micrococcus presenting similar characters in the blood of scarlet fever patients Mice fed with cultures from both these sources were similarly affected From the blood of the infected mice the same micro organism was obtained and cultivated When re inoculated upon calves it produced identical lesions with the material from the diseased cows Thus the proof seems complete that a disease of cows heretofore considered unimportant is identical in nature with one of the most dreaded diseases affecting the human race That the etiological factor of scarlet fever is a bacterial organism seems also to be satisfactorily demonstrated by the researches of Dr Klein These discoveries when fully appreciated, must exert a beneficial influence upon the efforts of sanitary authorities to restrict this fatal disease A conviction of the bacterial nature of scarlet fever will tend to impress upon physicians the importance of personal measures of prevention If, as is generally assumed, the infective agent of scarlet fever is contained in the epidermis, thorough disinfection of the surface of the body will reduce the period of infectiveness of the person who has passed through an attack Instead of six to eight weeks, as now recommended, the period of isolation, when accompanied by appropriate measures of disinfection, may probably be reduced to one week after the cessation of the active symptoms This gain of time will often be a matter of great importance That even the less complete measures of isolation and disinfection heretofore practiced in certain places are effective, is demonstrated by Dr Henry B Baker, the efficient secretary of the State Board of Health He has shown most conclusively in a statistical table recently published, that the general practice of restrictive measures in scarlet fever, by the people of Michigan, since 1887, has resulted in a probable annual saving in that State of 338 lives from this one disease These results likewise show the value of an efficient, public spirited, and wide awake State Sanitary organization

Dr Baker has also recently published an abstract of his researches into the causation of *pneumonia* From a study of the meteorological conditions for a long series of years together with the varying prevalence of pneumonia, he finds that certain meteorological elements are so uniformly associated with sickness from pneumonia as to make it appear that they bear an etiological relation to that disease These meteorological elements are the amount of ozone, the temperature, the relative and absolute humidity, the velocity of the wind, and, in a measure, the atmospheric pressure Unfortunately all of these conditions are so closely related and dependent one upon another, that no one of them can be picked out as the most important factor However, Dr Baker believes that the temperature of the outside air, governing to a great degree the other meteorological conditions mentioned is the main factor to be taken into account Graphic charts which he has constructed show a very close relation between the average temperature and the sickness from pneumonia, "and the curves representing sickness from pneumonia follow uniformly at such a period after the temperature curves as to make it seem certain that the sickness is directly or indirectly caused by a comparatively low temperature"

The established relation of pneumonia morbility to a cold, dry atmosphere suggests certain measures for the prevention of the disease Such measures would be to secure to as great a degree as possible, warm, moist air for respiration How to accomplish this both within and without doors is a problem to tax the ingenuity of the practical

I may call attention also in this place to the clinical reports of outbreaks of infectious pneumonia by Graham, Lee, Thane and others, as well as to the recent researches upon the micro organism which is

A comparison of the deaths from Scarlet Fever, reported to the Secretary of State as having occurred in Michigan during the five years (1869–73) just preceding the organization of the State Board of Health, with the three years (1874–76) immediately succeeding its organization, and those three years (1874–76) with the eight years (1877–84), during which the document on Restriction of Scarlet Fever was distributed, also the five years (1869-73) just before the establishment of the Board, with the eight years (1877–84) during the use of the document, and finally, a comparison of the five years (1869–73) just preceding the work of the Board, with the eleven years (1874–84) since the State Board of Health was established

Periods of Time Compared	Estimated Average Population	Average Deaths Reported per Year	Total Reported Deaths	Average Reported Deaths per Year per 10 000 Inhabitants	Decrease of Deaths per Year per 10 000 Inhabitants	Average Decrease of Reported Deaths per Year [1]	Lives Probably Saved According to the Reports [2]
5 years 1869–73	1 215 220	589	2 945	4 85			
3 years, 1874–76	1 384 515	421	1 262	3 04	1 81	252	756
3 years, 1874–76	1,384 515	421	1,262	3 04			
8 years 1877–84	1 689 988	449	3,595	2 66	38	64	512
5 years 1869–73	1 215,220	589	2 945	4 85			
8 years 1877–84	1 689,988	449	3 595	2 66	1 19	370	2 961
5 years 1869–73	1,215 220	579	2 945	4 85			
11 years, 1874–84	1 609 023	442	4 857	2 75	2 10	338	3,718

[1] Probably not all deaths were reported before or since the organization of the Board consequently the saving is probably greater than is here shown Allowing for increase of population

supposed to be the cause of lobar pneumonia So far as the latter is concerned, pathologists have not yet arrived at unanimity Weichselbaum found organisms in every one of a series of 129 cases The microbes found were of four different forms 1 A diplococcus which seems to be morphologically and biologically identical with Sternberg's *Micrococcus Pasteuri* This was present in the lungs or sputa of 94 cases 2 A streptococcus which was found in 21 cases, none of them of the croupous, or lobar, variety 3 Staphylococcus pyogenes aureus and albus, the organisms of pus These were present in 5 cases of secondary pneumonia, and 4, a bacillus or oval micrococcus, which presents all the characteristics of Friedlander's so-called "pneumococcus," was present in only 9 of the cases[1]

Weichselbaum also confirms the statement first made by Sternberg, that organisms similar to, or identical with those found in the lungs in pneumonia (*micrococcus Pasteuri*, Sternberg) are often found in the secretions of the mouth and respiratory tract in healthy individuals Hence, while the microbes mentioned, and especially the M Pasteuri, must be looked upon as the specific agents in producing pneumonia, certain predisposing agents are necessary to enable the organisms to proliferate and produce their pathological effects The predisposing or favoring causes may perhaps be found in the atmospheric conditions claimed by Baker to stand in close relation with the prevalence of pulmonary inflammation There seems every reason to believe that a solution of this important question is near at hand[2]

The contagiousness of *tuberculosis*, and its dependence upon the bacillus discovered by Koch, seem to be so well established that rational measures for the restriction of this most fatal and universal of all pestilences should command the attention of physicians and the public It is coming to be accepted that phthisical patients should not be treated in the same hospital wards with non tuberculous individuals

A tuberculous patient in a hospital ward must be regarded as a constant focus of infection from which the disease is spread Prompt disinfection of the sputa and other discharges of the tuberculous individuals will doubtless reduce the cases by diminishing the opportunities for infection At the conference of the State Boards of Health of this country held in Toronto, last October, a resolution was adopted to the effect "that it now seems probable that progress can be made in the restriction of consumption by declaring to the people that care should be taken to destroy or disinfect the sputa from persons suffering from pulmonary consumption" This public declaration of the foremost sanitarians of America is worthy of the careful consideration of every one interested in the prevention and cure of this deadly malady

In concentrating our attention upon the pernicious effects of the bacillus tuberculosis, however, we should not lose sight of the fact that other circumstances must be considered in accounting for the origin and spread of consumption The epoch making discovery of the causal agency of soil moisture, by Dr H I Bowditch, over twenty-five years ago, is apparently confirmed by the result of a study of the topographical distribution of phthisis in Pennsylvania made by Dr William Pepper during the past year Other predisposing conditions, such as defective ventilation, insufficient or improper food, and other depressing agencies, must be admitted as at least predisposing to the development of the disease There is danger that a too exclusive attention to the microbian factors of disease will narrow our views of epidemiology and preventive medicine As there is more in pathology than the discovery and culture of bacteria, so there is more in preventive medicine than the discovery and application of microbicides

The micro organism first described in 1880 by Eberth as the cause of *typhoid fever* has now obtained general recognition, and a number of careful researches during the past year seem to have firmly established its etiological importance In a paper read before the Association of American Physicians last year, Sternberg has given a summary of all the experimental evidence available up to that time, and concludes that it is convincing as regards the etiological rôle of this bacillus

If we regard the evidence in favor of the causal relation of this microbe as sufficient, and accept the conclusions of most epidemiologists, that the typhoid poison is contained only in the intestinal discharges, and by gaining access to drinking water spreads the disease when taken into the stomach of susceptible individuals, some recent bacteriological investigations will claim our interest

Meade Bolton, Wolffhugel and Riedel, and Percy Frankland have studied the behavior of different micro organisms in water of various degrees of purity While Bolton arrived at the conclusion that pathogenic bacteria—typhoid bacillus, staphylococcus aureus, etc —rapidly lost their vitality in water, the other observers mentioned found that these organisms increased Cholera spirilli were found to become apparently acclimated to the water, and preserved their activity seven months after they were added to the water Prudden has also shown, in a recent research, that typhoid bacilli contained in water are not entirely destroyed by freezing, even after remaining in this condition for 103 days

Further, Chantemesse and Widal have recently demonstrated the presence of the typhoid bacillus in

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1 "We may eventually find that there are various pneumonia cocci just as we have learned that the pus of acute abscesses contains sometimes one and sometimes another coccus or, again, two or more in association" Sternberg, Trans Path Soc Phila, vol xii

2 "The constant presence of this micrococcus in the buccal secretions of healthy persons, indicates that some other factor is required for the development of an attack of pneumonia and it seems probable that this other factor acts by reducing the vital resisting power of the pulmonary tissues, and thus making them vulnerable to the attacks of the microbe This supposition enables us to account for the development of the numerous attacks of pneumonia which cannot be traced to infection from without The germ being always present, auto infection is liable to occur when, from alcohol, sewer gas poisoning, crowd poisoning or any other depressing agency, the vitality of the tissues is reduced below the resisting point We may suppose, also that a reflex vaso motor paralysis affecting a single lobe of the lung, for example and induced by exposure to cold, may so reduce the resisting power of the pulmonary tissue as to permit this micrococcus to produce its characteristic effects

"Again, we may suppose that a person, whose vital resisting power is reduced by any of the causes mentioned, may be attacked by pneumonia from external infection with material containing a pathogenic variety of this micrococcus having a potency, permanent or acquired, greater than that possessed by the same organism in healthy buccal secretions" Sternberg, ibid

water from a well at Pierrefonds, near Paris, which had caused a small outbreak of typhoid fever Now, these facts, taken in connection with extensive epidemics of typhoid fever, such as that occurring at Plymouth, in Pennsylvania, in 1885, which was undoubtedly traceable to infected water, point irresistibly to the conclusion that the only practical way to prevent typhoid fever is to disinfect promptly and thoroughly all the alvine discharges of the patient, before emptying them out of the vessel in which they are received During the past winter, the Committee on Disinfectants of the American Public Health Association has concentrated its labors upon the determination of the best means of destroying the typhoid infection The results of this research have not yet been published, but I am able to state that the Committee will, before the end of this year, place at command of the profession the means to absolutely prevent the spread of typhoid fever, provided the disease producing cause is developed only in the intestinal canal of those sick with this disease

PUBLIC DISINFECTING STATIONS

Disinfection, or the destruction of the infective power of infectious material occupies to day a higher place in the practical applications of preventive and curative medicine than ever before Merely referring to the exact experimental observations upon the relative value of various articles used as disinfectants, published last year under the auspices of the American Public Health Association, and to be supplemented during the present year by some very important results, I would call attention to the establishment of public disinfecting stations, as lately put in operation in some European cities In Berlin Dusseldorf, Gottingen, Strasburg, Breslau, Leipsig and Danzig such disinfecting stations are now in use and at the command of the public, under proper official control Steam under pressure is used at most of the above as the disinfecting agent, although at some super heated steam not under pressure is employed Sanitarians generally prefer the former Such disinfecting establishments should be established in every American city and free to everybody They should be under the control of the health authorities who should be held responsible for their proper management In all contagious and infectious diseases, all possibly infected objects should be disinfected The attending physician should decide when and for what objects disinfection is necessary If any physician fails to recognize the importance of this prophylactic measure, his record as purveyor of contagious diseases will soon become known in the community in which he practises and the intelligent portion of the public will learn to avoid him That the public are not opposed to availing themselves of the advantages of these institutions is shown by the experience of the station in Leipzig, to which articles not infected, but simply requiring cleaning, such as pillows and feather beds, were sent, because by the action of steam the elasticity of the feathers was restored Some control is therefore necessary to prevent persons using the disinfecting stations as free laundries This control is best placed in the hands of the attending physician without whose order no one should have a claim for free disinfection The physician can best decide in any case as to the necessity or non necessity of this procedure

With the definite, scientific character to which practical disinfection has of late been brought, sanitarians are beginning to consider whether quarantines of detention and observation may not be largely abandoned The success of the system of "maritime sanitation"—in other words thorough disinfection, practised at the Louisiana quarantine station under the intelligent and energetic direction of Dr Joseph Holt during the past three years, has demonstrated that quarantine must mean in the future something entirely different from what it meant in the past The quarantine of the future will not be an obstruction to commerce or a hindrance to international intercourse

M Proust has during the present year, in a paper read before the French Academy of Medicine, suggested a distinct advance in this direction He advises that in cases of outbreaks of infectious disease upon vessels disinfection should be performed on board during the voyage The patients should be promptly isolated and all infected articles disinfected by means of steam under pressure In order that this may be efficiently accomplished, every passenger vessel should have a physician subject to the orders of the Government authorities and independent of the navigation companies M. Proust points to the success of the plan proposed by him, on the "Mytho," a French transport from Tonquin, upon which cholera was stamped out by sanitary measures during the voyage

The lack of care exercised by trans Atlantic steamship companies concerning the importation of smallpox and other contagious diseases, calls forcible attention to one of the points in M Proust's paper, namely that relating to the independence of steamship physicians It is certain that if the medical officers of the trans Atlantic steamship lines derived their authority from government instead of from the steamship companies, the landing of cargoes of living small pox, yellow fever and cholera material upon our shores would be very much diminished, and inland State and City boards of health could look with more equanimity upon the sanitary shortcomings of the quarantine establishments at most of the Atlantic seaports

FINAL DISPOSAL OF GARBAGE AND SEWAGE

Intimately connected with the question of public disinfection is that of the disposal of the refuse of cities—garbage in the widest sense In this field decided advances have been made On the one hand new methods for the inoffensive destruction of city wastes have been devised, and on the other, older methods whose utility has been disputed, have had their value confirmed by a large amount of concurrent evidence

"Purification by fire" has been for some years the *mot du guêt* with many sanitarians And there can be no doubt that crematory destruction of garbage is absolute so far as noxiousness of the residue of

the material so treated is concerned But although the successful adoption of the system of garbage cremation by the municipalities of Montreal, Canada, and of Wheeling, West Virginia, has given this method a boom in State Medicine circles, it is absurd to make the claim that it is the only safe and effectual means of disposing of city offal

The final disposal of sewage (fecal matter and house wastes by the separate system of sewerage, or these *plus* storm water and street washings by the combined system) has long been an intricate problem in sanitary administration The self interest of municipal corporations that for mercenary considerations empty their refuse into a stream which may be or become the source of water supply for their neighbors must be checked We have in this country an example of the offender confessing judgment and putting a stop to the practice on the moral ground of its unrighteousness, thus proving that corporations are not always soulless

The irrigation system of sewage disposal which has steadily won favor among American sanitarians in recent years, has been greatly extended in Germany during the past year In Berlin, where it has been in operation for some time, it has given great satisfaction That portion of the city from which the sewage is carried to the irrigation fields has a population of nearly nine hundred thousand or about two-thirds of the whole The water drained from the irrigation fields is submitted to a chemical examination every month For the year ending March 31, 1885, only a single instance occurred in which the analysis showed marked pollution This was afterward ascertained to be due to too rapid percolation of the sewage at one point, resulting in a direct mingling of the sewage with the "filtered" water In 1885 there were 5,374 hectares (13,275 acres) of land used as sewage farms by the Berlin municipality The proportion of inhabitants estimated to each hectare is 240, (about 100 to the acre) At this rate the above number of acres would be nearly sufficient to dispose of the sewage of the entire population of Berlin by irrigation In Danzig, on the shores of the Baltic, where the soil is sandy, one acre suffices for the sewage of 240 people In this city sewage irrigation has been practised for fourteen years The coldest weather does not interfere with the irrigation From February 23 to March 4, 1886, the temperature varied from 21° to 13° F without checking the process of irrigation The low temperature of our winters is sometimes cited as an objection to the introduction of the irrigation system in the Northern and Western portions of the United States, but this experience of the city of Danzig, corroborated, as I am informed, by that of Pullman, in Illinois, and of other places in this country invalidates the objection

In Breslau, Germany, a city of about 300,000 inhabitants, the irrigation system has also been adopted At the close of last year about 1,600 acres of land in the vicinity of the city were under cultivation for sewage farming The system, which is being gradually extended, is very popular There are now nearly 6000 premises connected with the sewers The cost to each householder so connected, is less than the former method of removing fecal matters, and as the number of sewer connections increase, the cost to each property owner is proportionately diminished

In some other German cities, where the physical or topographical conditions render the irrigation system impracticable, chemical precipitation of the sewage is practiced Various methods of chemical purification are in use in Frankfort, Wiesbaden, Halle, Essen and Ehrenfeld, and all seem to be more or less successful Most of them have only been in operation during the past year so that nothing definite can yet be said about their ultimate success It is said that the cost per head is about the same as that of well administered irrigation fields A board of distinguished engineers has recently advised the adoption of this system by the city of Providence, Rhode Island

The principal difficulties encountered in the management of chemical purification systems are the nuisance created during the sedimentation of the solid portions, and the disposal of the manurial product to advantage The same objections are urged against the various pneumatic systems, which seem to have made no progress in the favor of sanitarians abroad during the past year

In England the irrigation system has been in use for many years and has given general satisfaction The city of Birmingham, with over 600,000 inhabitants, has adopted it, and with a daily discharge of sixteen million gallons of sewage finds an area of twelve hundred and twenty-seven acres of land "amply sufficient" for the purpose of an irrigation field The income realized during 1885 from the sale of stock and produce from the sewage farm amounted to over $100,000

POISONOUS AND ADULTERATED FOOD

The brilliant discovery of a new and very poisonous ptomaine in certain cheese by Prof Victor C Vaughan, of Michigan, several years ago has been followed by the demonstration of the same substance in ice cream, which had produced symptoms of poisoning in a large number of persons who had partaken of the cream Subsequently Dr Vaughan discovered the same poison in milk kept for a time in his laboratory On experimenting with the substance Dr Vaughan found that it reproduced itself, and hence concluded, apparently with good reason, that it was the product of some micro organism which has, however, not yet been isolated This ptomaine, which Dr Vaughan named tyrotoxicon, has also been found by Drs W K Newton and Shippen Wallace in milk which produced poisonous symptoms in seventy-three persons at a New Jersey summer resort All other sources of poisoning were rigidly excluded

Prof Shearer, chemist to the Iowa State Board of Health, has isolated this poison from samples of milk which had produced poisonous symptoms He also found the poison in the vomited matters of persons taken sick in an outbreak of milk poisoning, at Corning, Iowa

Dr Vaughan has suggested that tyrotoxicon may be the active cause of cholera infantum He has reported a case of this disease in which the agency of the poison in its causation seems very probable The matter is of such great importance in view of the immense annual mortality from cholera infantum in this country, that it deserves careful study

In this connection it may not be superfluous to point out the apparent causes of the development of the poison in milk In the outbreak studied by Drs Newton and Wallace, it was elicited that "the cows had been milked at the very unusual hours of midnight and noon, and the noon's milking—that which alone was followed by illness—was placed while hot, in the cans, and then, without any attempt at cooling, carted eight miles during the warmest part of the day in a very hot month" (August)

In view of the fact that Dr Vaughan will himself fully describe the chemical properties and physiological action of tyrotoxicon in a paper to be read before the Section on State Medicine, I may omit any further comment upon this subject here

Closely connected with this question of poisonous food is that of food and drug adulteration Many persons think that the assertions of sanitarians in regard to adulterations are overdrawn, but the experiences of the Massachusetts and New York State Boards of Health, contain evidence, not only as to the extent of the adulterations, but also that systematic inspection and analysis serve to diminish the practice Of 2858 articles of food and drugs tested in Massachusetts during the first five months of 1886, 1135 were found to be adulterated or defective Of 91 samples of "olive oil" 68 were spurious Vinegar was found to be below the legal standard of 4½ per cent of acetic acid in 69 out of 116 samples Lemperance drinks all contained alcohol, some over 40 per cent, and cures for the opium habit contained opium in nineteen cases out of twenty The last is called in the advertisement, "double chloride of gold," but the chemist sought for the precious metal in vain in the preparation Mustard was found to be adulterated 124 times out of 211 samples, white pepper, 63 times out of 128 samples, black pepper, 41 out 71, mace, 29 out of 45 Out of 9 samples of horse radish one was found to be genuine, the rest sophisticated Molasses is "doctored" with chloride of tin, which precipitates the coloring matter and leaves the syrup of a lighter color The poisonous precipitate is sold to the candy makers Every one can draw his own conclusions as to the results of this practice Citrate of iron and quinine sold in New York State contained from 3⅓ to 11¾ per cent of quinine, instead of the 12 per cent demanded by the Pharmacopœia 8 out of 21 samples examined contained less than 9 per cent and 4 had less than half the proportion required by the Pharmacopœial standard Other drugs were found similarly deficient In view of these facts is it any wonder that physicians so frequently fail to obtain the results from medicines which they had been led to expect by previous personal experience or the observation of others?

In Germany, sanitarians are demanding that the general Government shall take cognizance of this evil and establish public laboratories where analysis of suspected articles can be made, and if found sophisticated, the dealer punished In this country the good work being done by the State Boards of Massachusetts and New York should be imitated in all the other States By constantly agitating this matter, the public will finally be awakened to efficient action [8]

The question whether salicylic acid is harmful when added to alimentary substances as a preservative has been decided in the affirmative by a commission of the French Academy of Medicine Prof Brouardel, in supporting the conclusions of the commission, said that salicylic acid was most dangerous in atheromatous subjects, in old people, and in those in whom the kidneys did not act well He advised that its use as a food preservative be proscribed The Academy adopted this recommendation I have been informed that the use of salicylic acid for the above mentioned purpose is extensive in this country Health authorities might with advantage take note of the recent conclusions of foreign scientists upon this subject

PUBLIC BATHS

No argument should be necessary to show the importance of bodily cleanliness in the preservation of health Free public baths have long been advocated by sanitarians, but, except in a few places, the difficulties to their general introduction have hitherto seemed insurmountable It is easily seen that tub baths are out of the question where large numbers of people are expected to use the bathing facilities, both on account of the high first cost and the difficulties and expense of administration It is manifest, however, that public, like private, bathing institutions must make provision for individual baths Large pools, in which many persons bathe at once, fail to answer the requirements of sanitary science, or of public decency

The difficulty of furnishing an individual bath for public use was first surmounted by a French army surgeon, Dunal by name He devised a shower bath which was introduced in one of the barracks at Marseilles This was soon imitated at other military posts in France, and at present the new French military barracks are generally supplied with a modification of the Dunal shower bath In the German army the same system has been adopted, and now every German soldier in barracks is required to bathe every week, the military authorities furnishing the necessary facilities bath room, warm water, soap and towels In circulars No 4, S G O, 1871, and No 8, 1875, Dr John S Billings, U S A, recommended the introduction of suitable bathing facilities in our own army, and in the last named publication gave an

[8] In this connection I would call attention to the following official announcement found in a recent German journal It shows that a paternal government against which we are somewhat accustomed to declaim in this country may have some good points

Under the name *Warner's Safe Cure*' a brown liquid contained in flat bottles holding about 500 grammes is recommended as a remedy against kidney diseases and sold at four marks per bottle

' The official analysis and the statement of a resident apothecary who sells the preparation have shown that the article consists principally of American Wintergreen and that its highest value is not over two marks

' This notice is published for the information of the public

'The President of Police BARON VON RICHTOFEN

'Berlin, March 30, 1887

illustration of a simple but efficient bath on the Dunal system, as used in the prison at Rouen, France The suggestion has, however, never been acted upon by the U S military authorities, as the question of baths for the men is left to the discretion of the post commanders In the United States Navy, likewise, where the system could be adopted with the greatest ease, and doubtless often with benefit, no general movement toward it has been inaugurated

The amount of water necessary for a thorough cleansing effect with the German soldiers' bath does not exceed, according to the statement of Surgeon General Roth, of the German Army, two gallons With the aid of a piece of soap and a little friction, a much better cleansing is obtained than when a thirty gallon tub bath is used

It is evident that if this form of bath is the best and most economical for soldiers, it is likewise good for the civil population With this thought in his mind, Dr Oscar Lassar, of Berlin, had a bath of this sort constructed in the hygienic exposition in Berlin in 1883, where it seems to have attracted much attention and given general satisfaction In a space 16½ × 40 feet sufficient room was obtained for ten baths with all the accessories of a bath house, office, heating apparatus, drying room for towels, dressing rooms, etc At the meeting of the German Public Health Association last year, Dr Lassar urged the extension of these baths to the civil population, in order that every German, as he puts it, "may have his weekly bath" Dr Lassar found that bathing establishments accessible to the public, (not free), are distributed throughout Prussia in the proportion of one bathing place to 38,000 inhabitants

Incidentally, Dr Lassar gives an excellent illustration of the sanitary value of free baths in some industrial pursuits At the white lead works of Hospelt, in Ehrenfeld, there are eighty persons employed, who are required to bathe every week Towels, soap, and all facilities necessary are furnished by the proprietor of the works While the workmen appreciate the baths as a luxury, and make constant use of them, the proprietor reports a highly gratifying improvement in the health of the employes since their introduction In the first year of the use of the baths (1884), the number of cases of sickness was diminished 20 per cent, and in the following year the reduction seems to have reached 50 per cent Lead colic, especially, has become much less frequent than formerly In the dye works of Heyl Brothers & Co, near Berlin, the firm have constructed a public shower bath of ten rooms or "cells," which is free not only to the workmen and their families, but apparently to any one that desires to make use of it The proprietors say the baths have been of the greatest benefit to the workmen, and they express the hope that their action will be extensively imitated The municipal government of Paris has recently authorized the erection of three large public bathing establishments in that city Each of these is to contain a large covered pool, provided with constant in and outflow of water, which is to be heated to the required temperature in the winter season The prices to be charged are three cents per bath to schoolboys, five cents to school girls, and five cents to the general public One of the baths is to be more handsomely furnished and the charge will be a little higher, in order to cover the expenses of the other two The exhaust steam or condensed water from three large steam boiler plants belonging to the municipality will be used for the purpose of heating the water The item of cost, although small, will, however, limit these institutions in the good they can accomplish, looked at from a sanitary point of view

The establishment of free baths in connection with public schools was first suggested by Dr Carpenter, in 1877, but was not, so far as I am aware, put in practice until two or three years ago when the Mayor of Gottingen, the famous German University town, decided to introduce it into the schools The population of Gottingen is about 21,000, and about 3 000 children attend the public schools The baths are fitted up in the basement of one of the school-houses, where two apartments, each 8 feet 3 inches by 17 feet, were constructed, one being used as a dressing room and the other as the bath room The walls are white-coated and the floors are asphaltum The heating of the basement, and of the water required for the baths, does not add much to the expense of heating the building

The baths consist of three shower baths with shallow zinc basins, 1 metre (40″) in diameter The children are bathed during school hours, and the process requires so little time that a class of fifty can bathe in about one hour Every child attending school has the opportunity of bathing once in two weeks The children bring soap and towels with them from home The baths are in use throughout the year At first, this novel feature of school administration did not commend itself to the favor either of the children or their parents, but less than two months after the introduction of the baths, 75 per cent of the children took advantage of the opportunity offered The authorities and teachers are unanimous upon the point that the system is of great benefit to the children, not only from its direct sanitary advantage, but from the habits of cleanliness formed, to which they are likely to adhere through life

The great sanitary importance of cleanliness has led me to make some investigations into the facilities for bathing enjoyed by the working people in this country With this end in view, I addressed a circular letter to the Mayors of ninety-two cities, asking information upon the following points, viz The existence of free public bathing establishments, their number, time when open during the year, and the extent to which they are used by the public Also the total number of residences and of buildings furnished with private baths in each city From the answers received tables 1 and 2 give a summary of those available for statistical purposes From table 1 it will be seen that the bathing facilities for the lower classes are absurdly insufficient, Boston making the nearest approach to an attempt to fill the want Even here, however, the poor laborer who has no bath tub at home, and is unable to pay the charges at a public bathing establishment, is deprived of this sanitary necessity during eight months of the year

TABLE I

CITIES IN UNITED STATES HAVING FREE PUBLIC BATHS

	No of Bathing Establishments	Time during which the baths are in use	No of persons using baths
Boston, Mass	17	June 1 to Sept 30	959 765 in 1886
Brooklyn, N Y	3	June to October	275 885 in 1886
Buffalo, N Y	(1)		Not very generally used
Cleveland, O	1		Little used
Hartford, Conn	1		Very extensively used
Philadelphia, Pa	5	June 25 to Sept 26	581 771 in 1886
New York, N Y	15	June to October	3 431 086 in 1883

1 Not from official reports

TABLE II

CITIES IN UNITED STATES NOT HAVING FREE PUBLIC BATHS

	No of Houses in City	No of Homes supplied with Bath Tubs
Baltimore, Md	70 000	20 000
Bridgeport, Conn	6 000	2 000
Cambridge, Mass	9 308	2 315
Charleston, S C	10 000	500
Cincinnati, O	33 471	6 000
Lancaster, Pa	5 600	1,000
Lynn, Mass	5 800	1 238
Milwaukee, Wis	25 000	3 000
Minneapolis, Minn	17 000	3 000
New Bedford, Mass	5 237	517
Peoria, Ill	7 600	600
Portland, Me	7,188	1,153
Reading, Pa	11 000	1 900
Savannah, Ga	6 000	4 000
Somerville, Mass	2 000	500
St Louis, Mo	50 000	8 000
St Paul, Minn	30 000	10 000
Wilmington, Del.	12 000	5 000
	313 794	71,003

That a very large proportion of the inhabitants of our cities are deprived of proper bathing facilities is shown by table 2 Eighteen cities from which available statistics were received show that only about twenty three per cent of residences are supplied with bath tubs Taking into account the difference in the numbers of persons occupying houses inhabited by the poor, and by those in easier circumstances, we may estimate that five sixths of the inhabitants of these cities have no facilities for bathing except such as are afforded by pail and sponge, or a river, lake or other body of water which may be easily accessible In winter, even these sources of cleanliness are cut off

I need not detain you to point out that this absence of the facilities for keeping clean is a crying evil which demands the attention of sanitarians, physicians, and in fact, all intelligent people All are equally interested Dirt is not only a source of disease, but probably no less a factor in the promotion of crime I may quote here with my full endorsement the enlightened opinion of the Mayor of Reading, who says "I am persuaded that uncleanliness produces immorality and crime, for in proportion to the decrease of personal importance which an individuals experiences, is he lost to the legal restrictions about him Beclouded faces drive men from the light, and darkness breeds dangers of all kinds, so that apart from sanitary benefits, public baths would in my estimate reduce crime" I quote these words with the more pleasure, for public officials do not often bother their minds with sociological problems

As to the arrangement of a free public bathing establishment, I agree with Lassar that the spray bath of the Dunal type, with such modifications as a more extended experience in the German army has suggested, would better fulfil the demands of sanitarians than the pool bath so generally used in these institutions The individual spray bath is more cleansing, each person bathes in absolutely clean water—at least as pure as the supply can furnish—and the privacy secured to each bather, both in the bath and dressing room, would tend to the maintenance of morality and self respect The economy of the spray bath, both in first cost and in administration, likewise points to it as the bath of the future especially for public purposes

I would urgently press upon your attention the great sanitary and social importance of this reform.

SOME RESULTS OF SANITARY MEASURES

In determining the results of sanitary measures, errors of observation, or of inference are very liable to creep in and vitiate our conclusions However, in a number of instances, after making all reasonable allowances for such errors, we may conclude that a reduction of the usual death rate of a place following upon the enforcement of sanitary measures, and continuing during the time such measures are carried out, is fairly due to the agencies mentioned As a fit conclusion to this summary of progress, I have thought it not inappropriate to group together a number of instances where the inference that the improvement was due to sanitary measures seems justified by the evidence upon record I have already called attention to the fact that in the State of Michigan the saving of life during a period of efficient sanitary administration amounted to 3,718 lives from a single disease (scarlet fever) in eleven years, or 338 per year

In a communication to the Michigan State Medical Society on May 13, 1887, Dr Baker gives some suggestive statistics showing the results of isolation and disinfection in restricting diphtheria There were in 1886, 461 outbreaks of diphtheria in Michigan, exclusive of Detroit and Grand Rapids In 243 of these it is uncertain whether any measures of isolation or disinfection were taken In 102 outbreaks isolation and disinfection were both neglected, and in 116 outbreaks isolation and disinfection were both enforced The sequels of these outbreaks were as follows

In the total of 461 outbreaks there were 3,085 cases and 656 deaths, an average of 6 69 per cent of cases and 1 42 per cent of deaths In the 243 outbreaks where it is doubtful whether proper restrictive measures were taken, the cases were 1,103, with 250 deaths, an average of 4 54 of cases and 1 03 of deaths *In the 102 outbreaks where no measures were taken, the cases numbered 1,650 and deaths 329, an average of 16 18 per cent of cases and 3 23 per cent of deaths* Contrasted with this, we have *116 outbreaks in which both isolation and disinfection were enforced, with only 332 cases and 77 deaths, an average of 2 86 per cent of cases to each outbreak and only 66 per cent of deaths* Dr Baker points out

that according to these statistics 1,545 cases and 298 deaths from diphtheria were prevented during the year 1886, in his State If these results do not show conclusively the effects of appropriate sanitary measures, then figures are most abominable liars

In Great Britain, it is estimated by Dr Ogle that sanitary improvements have had the effect of adding 1 44 years of life to every male, and 2 77 years to every female in England and Wales, and Mr Edwin Chadwick is quoted as saying that "the changes in the death rate have given to the community an annual addition of 1,800,047 years of life shared among its members, and allowing that the changes in the death rates are the direct consequence of sanitary interference, we must regard this addition of nearly two million years as an annual income derived from the money invested in sanitation" If we put this saving of life in round numbers, we find that in the five years 1881-5, there has been an annual saving of the lives of 62,000 persons in England and Wales, which would have been lost in default of the sanitary measures enforced Capt Douglas Galton estimates the annual saving of life in Great Britain in 1880 84 at 102,240 This is on the assumption, of course, that no other causes could or did produce this saving of life It is greatly to be regretted that in this country we have no such system of vital statistics as will enable us to "take an account of stock," which would show whether we are making similar progress But, if we could do so, such a reduction in the death rate among our 60,000,000 people would show a saving of the lives of 144,000 persons per year Certainly this is worth striving for

In Holland a law to restrict the spread of infectious diseases went into effect in 1872 Comparison between the mortality before and since that year shows that there has been a decrease in the number of deaths from typhoid fever, small-pox, scarlet fever, measles and diphtheria The measures relied upon were isolation and disinfection

When we reflect that in the year 1885 there were 2,374 deaths from measles and scarlet fever in the State of New York, the inquiry presents itself forcibly whether a rigid system of notification, isolation and disinfection carried out under the authority of an efficient health officer, could not greatly reduce and in time wipe out the mortality from such purely contagious diseases

Another instance showing the effectiveness of prompt isolation and disinfection in stamping out a beginning epidemic, is afforded by the incident of the outbreak of yellow fever at Biloxi, Miss, last summer The measures taken have been already pointed out in sufficient detail on a preceding page

In my native city of Baltimore, it is claimed by the health department that certain infectious diseases have been reduced markedly since the introduction of a thorough system of plumbing inspection During the same time, however, isolation and disinfection have been more thoroughly practiced, and doubtless most of the good results are due to these features of the sanitary administration

In Memphis, which has for six years past been the cynosure of all sanitary eyes in this country, the improvements, initiated by the National Board of Health, and so efficiently carried out by the local board under the presidency of Dr George B Thornton, have resulted in reducing the total death rate from 35 per thousand to 23 80 per thousand

In this great metropolis of the West, whose bountiful hospitality we are now enjoying, I find it stated that during the last five years the death rate has decreased from 25 69 per thousand to 19 46 per thousand, an apparent net saving of 17,214 lives in that period, due probably to the enforcement of sanitary measures Other instances of the same sort could be cited I have quoted the above merely to point out the way in which, it seems to me, the practical sanitarian should direct his forces in the struggle with communicable diseases First of all the health authority must ascertain the presence and locality of every case of contagious or infectious disease This can only be done by requiring the physician to promptly report every such case that comes to his professional knowledge I am quite aware that many physicians contest the right of the State or municipality to exact compliance with laws requiring them to report such cases Some contend that such notification is a violation of professional secrecy, but the majority object because the State offers no pay for service performed The latter objection seems to me valid, physicians do not owe the State gratuitous service, any more than do other professions The ethical objection appears to me the height of absurdity I beg leave to quote upon this point the remarks of Dr Ezra M Hunt "If Boards of Health," says Dr Hunt, "have as one of their objects the prevention of the extension of communicable diseases, it would seem to follow as a corollary that they have the right to know where such diseases exist It is a parody on ethics to class as professional family secrets, the concealment from a health officer that there is small-pox in Mr A's family, or that Mr B's children are having the scarlet fever or diphtheria Nor can any judicial decision be found to sustain any, who, under the assumption of an invasion of personal rights, claim that the law has no right to obligate those in attendance upon cases of contagious disease to help guard the public health"

The *first* requirement then in dealing with infectious diseases from "a State Medicine point of view" is *notification*, and inasmuch as such notification will never be effective if voluntary, it must be made compulsory

The *second* requirement in restricting the prevalance of such diseases is the segregation of patients, and guarding healthy individuals, except the immediate attendants, from contact with them This is evident to all intelligent persons at first thought

The *third* requirement is prompt and thorough disinfection, in other words, the absolute destruction of the infective properties of infectious matter, in whatever that may consist For a number of diseases the infectious material itself, as well as the modes by which it is given off from the patient or communicated to healthy persons are known For others we may venture a probable guess

Recent studies upon disinfectants have pointed

out those which are trustworthy, and removed difficulties in their practical application

I would therefore declare the watchwords of the practical and progressive sanitarian in dealing with communicable diseases to be these three *Notification, Isolation, Disinfection*

NOTE.—Near the end of May 1887 yellow fever broke out in Key West Fla but had not assumed the dimensions of an epidemic at the date of delivery of this address

ORIGINAL ARTICLES.

ERYSIPELAS OF THE PHARYNX AND LARYNX, EPIDEMIC AND SPORADIC

BY BLDFORD BROWN, M D,

OF ALEXANDRIA VA

PRESIDENT OF THE MEDICAL SOCIETY OF THE STATE OF VIRGINIA MEMBER OF THE BOARD OF MEDICAL EXAMINERS OF VIRGINIA, AND OF THE AMERICAN MEDICAL ASSOCIATION

The etiology of this affection is somewhat obscure, and its medical literature rather scanty The disease has appeared in the United States and Europe in certain localities, both in epidemic and sporadic form Like all erysipelatous affections, it possesses contagious properties But the most frequent cause appears to be some mysterious epidemic influence which invades certain localities and sections, expends its septic properties, and probably disappears never to return in the same region In a certain limited district in my knowledge, erysipelas of the throat of a very malignant type prevailed some thirty-two years since I am not aware that it has ever returned to that particular locality

Epidemic erysipelas of the pharynx, because of the peculiar dark appearance of the tongue, has in certain districts received the appellation of "black tongue" In other localities it has popularly been termed "choke disease," because of the rapid tendency to suffocation, from the glottis and epiglottis becoming suddenly involved in the œdematous process It has also been designated by some as "malignant sore throat," because of the immense fatality attending the disease That epidemics of erysipelas attacking the throat exclusively may appear in particular districts, run their course, and finally disappear, is an occurrence which has been repeatedly witnessed At other periods, epidemics of erysipelas of the external surface may prevail, during which a limited number of cases may occur in which the disease may attack the throat alone I am inclined to the belief that an ordinary case of tonsillitis, occurring during the prevalence of a very positive tendency to epidemic erysipelas with a septic condition of the atmosphere, would very readily become septic in character and assume the form of erysipelas, just as we observe a wound become erysipelatous when a decided tendency to that type exists, and presenting what we term traumatic erysipelas

Symptoms.—In the initiatory stage of erysipelas of the pharynx, the entire mucous surface of the velum, uvula, tonsils, root of the tongue and post-pharynx is observed to be red, highly engorged, dry and puffy The distressing burning pain is usually very great The difficulty of deglutition from stiffness of the structures, even at this stage, is very considerable The rapidity of progress of the inflammatory action, swelling and œdema, from this stage, is something marvellous, and constitutes a marked and distinctive feature of the disease No other local affection within my knowledge pursues invariably so rapid a course towards a fatal termination Within from six to twelve hours the respiration becomes difficult, stertorous, and gurgling The voice at this stage becomes whispering, and then completely obliterated Then follow suffocation and death

Previous to these changes in the functions of the parts, the swelling and œdema of the structures in the pharynx, the glottis and epiglottis, assume enormous proportions The root of the tongue being also involved in the erysipelatous affection, the organ, from compression of its venous circulation, assumes a dark, livid, dry appearance, and occasionally protrudes somewhat from the mouth

The cavity of the pharynx, if any portion can be seen, is observed to be one indistinguishable red, swollen mass, without any defined boundaries, or anatomical features Under these circumstances it is impossible to obtain a view of the glottis or epiglottis, but the impaired state of the voice and its gradual abolition, and the painful difficulty of respiration, would indicate the excessive œdema of those organs In the cases seen the febrile reaction was not high, while the pulse usually varied from 100 to 120, and was usually feeble and compressible

Diagnosis.—Erysipelatous affection of the fauces, in my experience, never causes membranous exudations on the mucous surface attacked It can, therefore, always be easily distinguished from the diphtheritic form of disease Its wonderfully rapid development and progress, the excessive swelling and œdema, and invariable extension towards the larynx, at once distinguish the disease from amygdalitis From simple laryngitis it differs in the fact that erysipelas always begins in the structures of the pharynx—the tonsils, velum, uvula, and posterior portion of the tongue, and progresses downwards From simple glossitis, which is often very rapid, erysipelas of the throat differs in the presence of the enormous inflammation and swelling of the faucial structures peculiar to the latter affection, and entirely absent in the former

The increase of inflammation and swelling in erysipelas of the pharynx is more alarmingly rapid than in any disease of my acquaintance, and the loss of voice and difficulty of respiration are correspondingly great

The disease may be diagnosticated from scarlet fever by the appearance of the tongue, which is rather of a pale, livid appearance in the beginning, and ultimately becomes swollen and of a dark livid color, differing materially from the scarlet red "strawberry tongue" of scarlatina The sense of impending suffocation is, in the advanced stages, always sufficiently great to cause an infinite degree of mental and physical distress and suffering

Prognosis.—The prognosis of erysipelas of the throat is of the gravest character Without speedy and prompt relief a fatal termination will invariably

ensue The rate of mortality has not infrequently attained 90 per cent From 70 to 80 per cent is frequent

Treatment—Twenty nine years ago the first case of erysipelas of the pharynx and larynx came under my professional observation The history of the case may be summed up in the following brief statement The patient was a young man of 19 years, of good family, but having a hereditary disposition to tuber cle He was attacked in the night with what was supposed to be an ordinary tonsillitis But in the course of four hours the inflammation of the structures of the pharynx had become very great and the deglutition almost impossible, while the difficulty of breathing had become distressing The voice, even at this stage, showed indications that the vocal organs were beginning to participate in the trouble By 7 A M the patient was in extreme danger The voice, previously reduced to a mere whisper, was now entirely obliterated The respiration was stertorous, at times gurgling, and exceedingly labored and distressing The complexion was livid The interior of the pharynx, when the livid and swollen tongue was depressed, presented the appearance of a solid red mass, without anatomical outlines The enormously swollen tissues had encroached upon the openings of the posterior nares, throat and glottis to such an extent as to very nearly close them At this stage the patient was threatened with asphyxia, as the larynx had manifestly been involved by the erysipelatous disease, in addition to the obstructions existing in the posterior nares and pharynx The patient now suffered from extreme and painful difficulty of breathing and great restlessness The face and complexion of the hands became almost livid, the pulse frequent and feeble, the skin cool The swollen tonsils and palate were freely scarified, with the expectation that the local depletion might reduce the œdema and relieve the distress It failed to give any alleviation whatever Nitrate of silver was also liberally applied, but without benefit

The patient being now entirely unable to swallow, no internal treatment could be resorted to In consultation, as a *dernier ressort*, tracheotomy was proposed This was opposed obstinately by the friends of the patient Determined to give my patient another chance for life, and suspecting that this throat affection was erysipelatous in nature, from the fact of a prevailing tendency to that affection existing at the time, I decided in this case, as a mere experiment, to resort to extensive counter-irritation by some agent that was speedy, prompt, efficient, and at the same time harmless in character, hoping thereby to induce extensive dilatation of the cutaneous capillaries and a transference by metastasis of the erysipelatous action to the surface The sinapism was selected as the counter-irritant to be used in this case The entire neck, front of the chest, and back, corresponding to the scapulæ and upper part of the spine, were speedily covered or enveloped in strong, freshly prepared sinapisms In ten or fifteen minutes the sinapisms began to act In thirty minutes the burning pain over the entire surface enveloped became almost intolerable Then, for the first time, the patient began to experience some relief to the obstructed respiration Increased relief was now experienced every minute, and corresponding improvement of respiration On removal of the sinapisms, it was found that the entire surface of the neck, front of the chest, and upper dorsal region, was covered with a universal deep red blush The relief to the respiration was now such as to enable the patient to inhale sufficient air to sustain life for the time Equally remarkable and pleasing were the local changes in the fauces There was a manifest subsidence of inflammatory action and œdema of the structures involved Within a few hours a very extensive attack of erysipelas had been developed over the chest and a portion of the lower neck

The effects of this development upon the disease of the pharynx and larynx, and tongue, was truly marvellous The internal affection had almost completely subsided, the difficult respiration was relieved, the internal affection transferred by metastasis to the external surface, and the life of the patient saved

This peculiar feature of this case serves to illustrate in a remarkable manner that inherent characteristic of erysipelas to change its location, by metastasis, from one organ to another This very interesting fact also furnishes an intimation of value in our treatment of the disease when attacking vital or important internal organs, that relief may be attained by encouraging this tendency by means of counter-irritation Prompt, speedy, effectual counter irritation by means of sinapisms extensively used, was found to act most favorably in every respect Such counter-irritants as epispastics, ammonia, oil of turpentine, are inadmissible, because they may establish inflammatory action sufficiently violent in type as to cause gangrene of the skin

I regard it as exceedingly fortunate in this case that tracheotomy was not resorted to If such had been the case, then erysipelatous inflammation would surely have attacked the tracheal wound Tracheotomy is manifestly an operation not suitable to erysipelas of the fauces Since the successful treatment of this case by means of counter-irritation, I have resorted to the remedy not only in all cases of the genuine disease, but also in all cases presenting indications of an erysipelatous tendency involving the faucial surface, and always with benefit In true cases of this kind, the remedy will always bring out a crop of erysipelas on the surface Prompt and extensive counter-irritation by means of sinapisms applied thoroughly around the neck, over the chest and back, covering the scapulæ, was found by myself and three medical friends to whom the practice was suggested, so as to produce dilatation of the cutaneous capillaries on a widespread scale, and thereby inviting the flow of a large amount of arterial blood from the internal structures to the surface, to act manifestly as an important diversion of the circulation, and form a positive diverticulum which invariably, according to our experience, afforded speedy relief to internal disease, and saved life A medical friend in a distant section of this State, which was infected with erysipelas of the fauces of an exceedingly malignant type, who, on my suggestion, applied this

simple method of treatment to his patients, informed me that the most favorable results followed, in almost every case, after its application, whereas previously the results, under other treatment, were almost invariably fatal

In certain cases which have come under my observation during the prevalence of erysipelas having many of the characteristics of erysipelas, but wanting in others, I have also found this thorough method of counter-irritation to act exceedingly favorably in relieving the enormous congestion and inflammation of the faucial structure While in this class of cases there was no appearance of erysipelas on the surface following the counter irritation, the irritation of the skin being very extensive afforded relief to internal trouble In these cases of metastasis of erysipelas from the fauces to the skin, caused by the action of the counter irritant, all local means of treatment should be desisted from, because of the known tendency to migrate The tincture of the chloride of iron, hydrochloric acid, chlorate of potash, and the liquor arsen chloridi may be used advantageously internally

Case 2 —An adult, aged 40, was attacked with an affection of the throat, supposed to be acute tonsilitis, but what in a few hours proved to be a dangerous attack of erysipelas of the pharynx and larynx The œdema and inflammation of the faucial structures became enormous, so as in a few hours to endanger respiration The breathing became first of a snoring character, then stridulous, finally muffled, and almost indistinct, because of the great obstruction At this stage the tone of the respiratory murmur throughout the chest also became exceedingly feeble, indicating a deficiency of inhaled air The tongue and skin assumed at this stage of the case a decidedly livid appearance The pulse was feeble and frequent, and the extremities rather cool In this case the same system of extensive counter-irritation was resorted to as in the former, and with equally favorable results

In erysipelatous affections attended with great rise of temperature, with delirium and a tendency to cerebral complications, I have for some time past used salicylate of soda, and more recently with still better effects, the salicylate of ammonia While my experience in the use of this remedy is not extensive, it is sufficiently so to establish in my estimation its merits as a valuable agent in the treatment of this peculiar type of the disease

Cerebral complications of erysipelas are usually regarded as examples of metastasis to the brain I regard this view of the case as questionable In those cases of cutaneous erysipelas involving the brain, there is certainly no subsidence or disappearance of the external affection, while the internal affection may continue to increase in gravity All cases of this kind seen by me, I have had good reason to regard as true examples of embolism of some of the cerebral vessels, occurring first at a circumscribed spot, or locality, the effects of this gradually radiating in the form of engorgement and inflammation, and ultimately producing an area of morbid action, often of an extended character, which may terminate in softening or suppuration I am not aware that any treatment heretofore instituted has been able to reach this class of cases, certainly the authors have given us none In the past few years, in a few cases threatening cerebral complications in which I had reason to suspect a tendency to embolism, I have prescribed with decided benefit the salicylate of ammonia in gr xx doses every three hours, and the mistura ferri et ammon acetatis in ℥ss doses in connection with it, also every three hours This is a far better treatment in this class of cases than the traditional tinct of chloride of iron and quinine The therapeutic action of the salicylate of ammonia is eminently antiseptic, acting specifically on the septic form of inflammation, and when combined with the carbonate of ammonia, I believe it promises more for the dissolution and removal of emboli than any other agent It has proven to be, in my hands, an efficient antipyretic

In conclusion, I can say truthfully, that in the treatment of erysipelas of throat, time is a precious and vital consideration Local applications of iodine, nitrate of silver or simple astringents, are worse than useless, they are deceptive The internal administration of quinine and iron is impotent for good We want some agent which will produce promptly and efficiently an extensive counter irritation, and sudden dilatation of the cutaneous capillaries over the seat of the internal erysipelatous affection, thereby relieving the enormously engorged structures and preventing closure of the glottis In certain cases, accompanied with excessive œdema of the cellular tissue of the neck and adenitis, I have found the flaxseed poultice thoroughly covered with mustard, applied very hot and frequently renewed, to exert an admirable influence in reducing the adenitis and œdema

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ANTIPYRIN IN RHEUMATISM, ITS VALUE AND MODE OF ACTION

BY N S DAVIS, JR, A M, M D,

PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE IN THE CHICAGO MEDICAL COLLEGE

Read before the Section of Practice of Medicine, Materia Medica and Physiology, at the Thirty Eighth Annual Meeting of the American Medical Association, June 8, 1887

During the last few months numerous writers in Germany and France have described the good effects of antipyrin in acute rheumatism It has been said of it that it relieves the pain and allays the fever as quickly as does the salicylate of soda, and that under its influence the cutaneous redness over the affected joints, and their swelling, gradually but soon disappears

All of these statements I can confirm by my experience during the last four months in some twenty cases

I have used antipyrin in acute cases, also in those that were subacute and in the acute exacerbations of those that were chronic I noticed early that the greatest and most rapid improvement was obtained in cases in which there was a rise of temperature above the normal

The first case in which I used antipyrin was one of chronic rheumatism in which there was, at the time, an acute exacerbation The patient's stomach was so irritable that very little was retained by it Enough of salicylic acid or of the salicylates could not be given to produce an impression on the disease I therefore tried as an experiment a single dose of antipyrin, of twenty grains, at bed time Soon after taking the medicine the pains, which were uniformly much more severe at night than during the day, were eased The patient breaking into a profuse perspiration, fell asleep and passed the first restful night for some weeks After a few days under this treatment her fever disappeared and she was almost free from pain When the fever was wholly wanting it was noticed that the antipyrin ceased to ease the pain that remained, and did not relieve the chronic stiffness and swelling of the joints As often, however, as the temperature rose the antipyrin acted well I have met with similar results in the treatment of three other cases of chronic rheumatism No relief to the pain, swelling and other symptoms of inflammation was obtained in a case of gonorrhœal rheumatism in which one ankle, one knee and the joints of the fingers were much swollen and exceedingly painful There was in this case at the time no fever.

As an illustration of the action of antipyrin in acute cases, I will cite the history of a young man recently dismissed from Mercy Hospital, apparently cured He had been sick with a sharply acute and quite severe attack of rheumatism for ten days, when he entered the hospital During that time most of the large joints had been in turn affected When first seen by me his temperature was 103°, his pulse quick, bounding, full, but compressible, his skin moist, with moderate perspiration, his countenance indicated pain and distress At the time the pain was almost wholly limited to the left knee and right shoulder and elbow All these joints were considably swollen, and the skin over the knee was very slightly reddened There were no evidences of endo- or pericarditis Appetite was completely wanting, but thirst was much increased The bowels were constipated The urine was somewhat scant and highly colored Sleep of more than momentary duration had been impossible for many days In a word, the patient at the moment presented the symptoms characteristic of a typical case of acute rheumatism As it was one of the earliest cases of acute rheumatism that I treated wholly with antipyrin, I ordered at first the administration of a powder containing twenty grains of the drug only night and morning The following afternoon he reported that soon after taking the medicine he slept, and for three or four hours was free from pain, but as the influence of the drug wore off the pain returned His temperature had then lowered, but was still considerably above normal I now ordered the antipyrin powders given three times daily instead of twice Two days later the patient looked much better, and described himself as almost free from pain, the cutaneous redness over the knee was gone, and all the joints were less swollen, but still stiff and somewhat painful on attempted motion The temperature for the most part during the preceding twenty four hours was normal, twice it rose slightly The frequency of the administration of the antipyrin was left to the judgment of the house physician, the directions being to administer the drug whenever the temperature rose or an access of pain occurred Following this plan, he received during the next two days two powders daily He was entirely comfortable so long as quick and violent movements were not attempted For eighteen hours there had been no abnormal temperature The swelling of the joints was much less, and freedom of motion much greater The case progressed steadily in a favorable manner, and all stiffness and pain disappeared during the next week The antipyrin was continued for several days after all fever was gone No other medicine was administered after its discontinuance, the patient simply being guarded against adverse atmospheric influences

In the other acute cases in which I have tried antipyrin I have been most pleased with the readiness with which it relieved pain and lessened fever In some instances the improvement was more marked and more rapid than in the case I have just sketched, in others it was somewhat slower, but always decided I feel confident that, so far as a limited number of cases will permit one to determine, antipyrin can be said to be as efficacious as the salicylates Being at first impressed with the thought that the relief obtained in rheumatism was due to the antipyretic effects of the drug, I substituted for it salicylic acid as soon as the temperature became normal, as, however, experience showed that the efficacy of antipyrin did not depend upon this property, I continued its use, as improvement took place, in lessened doses and less frequently until a cure was established

In the hospital cases most recently treated the drug has been used in fifteen grain or gram doses, administered at the height of the disease every four hours, diminishing the frequency of its repetition as improvement occurred It has seemed to me that I obtained more satisfactory results in my private patients to whom I gave it in larger, twenty grain, doses, four times daily, when the disease was at its height, and to whom, during the period of improvement, it was given in smaller doses, but not at first less frequently From sixty to ninety grains (four to six grams) daily are recommended usually by those who have employed antipyrin in rheumatism

The advantage of antipyrin over the salicylates consists chiefly in its less nauseating properties, its less liability to provoke vomiting, headache, and noises in the ears Not unfrequently a patient is found who can not take the salicylates in efficient doses While trying antipyrin, both in rheumatism and in other febrile diseases, I have found only one or two persons who rejected it, and a few others, whose stomachs were irritable, who complained of slight nausea immediately after taking it These effects are, however, much less frequently produced by it than by the salicylates It can also be given efficiently, when necessary, by the rectum or subcutaneously

The only ill effect that is likely to result from the

use of antipyrin is the so called "antipyrin rash" This is seen only in a very small proportion of the cases treated with it Two or three cases of fatal collapse have been reported, occurring in typhoid patients after taking antipyrin At the most, however, this is an exceedingly rare accident, and it is questionable even if, in the cases referred to, the accident was due to the antipyrin Ringing in the ears has been reported as occurring, but so seldom that it need not be looked for when the usual doses are used

Others have found, very rarely, a case of acute rheumatism in which no relief could be obtained from the antipyrin treatment The same can be said, however, of the usual salicylate treatment

The use of the drug does not appear to influence the frequency of the occurrence of heart complications, and their existence is not a contra indication to its employment

It is impossible, from what we yet know of the nature of rheumatism and of the physiological action of antipyrin to explain thoroughly its therapeutic action The perspiration which very uniformly follow its administration, and in rheumatism seems to accompany the diminution of pain, is probably due to relaxation of the cutaneous vessels, such as has been observed by Beyer[1] and others, and which naturally would feed and stimulate the cutaneous glands It has been shown that the peripheral vessels dilate under the influence of antipyrin, the arteries dilating when large doses are administered, and only the veins and capillaries when smaller ones are employed Whether this change of calibre is due to vaso motor influence or not is undecided, some claiming that the change is brought about by the direct action of the drug upon the vessels, since similar changes take place in isolated organs," others claiming the reverse to be true [2]

Antipyrin, when mixed with blood, does not cause a change of color or destruction of the corpuscles, as does kairin, thallin, resorcin,[3] and probably antifebrin [4]

Possibly its antipyretic properties are to be explained by the vascular changes which it produces, since they would contribute to increase the radiation of bodily heat This is the explanation offered by Bettelheim,[5] Auseroff and Beyer Arduin thinks the diminution in temperature is due to an influence exerted upon the thermogenic nerve centres During the last month P J Martin[7] has published the results of experiments which show that, almost uniformly, heat production is diminished by antipyrin, and heat dissipation is very much increased It thus would seem to be an ideal antipyretic In the small proportion of cases in which heat production was not diminished, heat dissipation was so far in excess that the bodily temperature was lowered Several observers have noted that under the influence of antipyrin the surface temperature rises while the internal temperature of the body falls [8]

Its power of allaying pain in rheumatism is probably not dependent upon these vascular changes or the apyrexia produced by it, but upon a direct action on the nervous structures of the body Antipyrin, though apparently most efficacious in rheumatic fever and least in muscular rheumatism, still, even in the latter, often acts beneficially In many painful disorders purely neuralgic in character it gives the most prompt relief, for example, to the sharp neuralgic pains of locomotor ataxia Ungar,[9] T S Robertson,[10] and others, say it is efficacious in migraine Germain Sée[11] has witnessed its power of relieving pain in other forms of neuralgia, and in gout, lumbago and sciatica

The fact that there was in these diseases no common pathological effect except that of pain, led the last writer to study particularly its action upon the nervous system The results of his experiments he reported to the French Academy of Sciences on the 18th of April of this year When injected subcutaneously in dogs three kinds of phenomena were observed In the first place, a notable diminution of sensibility was observed, a true analgesia of the limb injected, sometimes, also, of the opposite one. In the second place, electric excitation of the sciatic nerve produced in the muscles of the opposite side only very feeble contractions, which points to diminished sensibility and reflex power in the spinal cord In the third place, when antipyrin was introduced into the circulation of an animal except into one limb, the vessels of which were ligated, it was found that throughout the body the muscles contracted slowly and with difficulty, while those of the ligated limb contracted with their wonted vigor It is evident, therefore, that antipyrin also affects the muscles, or more properly, perhaps, the nerve endings in the muscles Analgesic effects have been frequently noted by others Large doses administered to animals cause convulsions, both clonic and tonic Lessening of the reflexes, also, has been observed by others, as, for instance, by Arduin [1] This last author, as well as Coppola,[13] thinks that the brain is influenced by the drug, since, when convulsions are produced by it, their severity is much diminished if the brain is separated from the cord

Antipyrin does not affect the respiratory movements, although the frequency of respiration in fever diminishes as the temperature falls under its influence As ordinarily administered, the rhythm and strength of the heart's action are not influenced Beyer has shown by physiological experiments that when it exists in small amounts in the circulatory fluids it causes an increase of work performed by the heart, while in large doses the contrary effect is produced

[1] "The Influence of Kairin Thallin Hydrochinon Resorcin and Antipyrin on the Blood and Blood vessels" By H G Beyer, Am Journ Med Sci April 1886

[2] Quirello and Coppola See article by Beyer, Am Journ Med Sci

[3] Auseroff Therapeutic Gazette May 15 1886

[4] De l antipyrin contre la douleur" Par Germain Sée Le Bulletin Médical April 20 1887

[5] Bettelheim Med Jahr K K Ges d Aerzt II III 1886

[7] Modern Antipyretics" By P J Martin, Therapeutic Gazette May 16 1887

[8] See Beyer Am Journ Med Sci

[9] Ungar Centralblatt f d Gesammte Therapie January, 1887

[10] "Antipyrin in Migraine Pyrexia etc" T S Robertson N Y. Med Record, May 7 1887

[11] See above Le Bulletin Médical

[1] Arduin Therap Gazette, October 15 1885

[13] Coppola, Therapeutic Gazette October 15, 1885

Some have also noted increased force in the heart's action, while others have observed a diminution in it This discrepancy is probably due to the size of the dose administered

The drug is eliminated by the urine, and can be found in it two hours after administration, and usually for thirty six to forty eight hours afterwards [14]

The following conclusions are, I think, justified by our present knowledge of antipyrin in the treatment of rheumatism 1 It is as efficacious as the salicylate of soda, producing similar therapeutic results, and is less nauseous than the latter, and does not produce headache or ringing of the ears 2 Usually it acts most efficiently in the most frankly acute cases 3 Besides reducing, by its antipyretic properties, the fever, and also the pain, which many antipyretics relieve, it reduces the pain by acting directly upon the nervous system

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MEDICAL PROGRESS.

COCAINE IN LABOR AND GYNECOLOGY —DR GEO H ROQUE DABBS, in a note on this subject, tabulates his observations as follows

1 I obtained equally good results from a 6 per cent solution as from a 12 per cent solution of cocaine (hydro chlorate), but in dry labors I now use a ¼ per cent solution of the alkaloid itself in castor-oil Into the thin parchment like os I put a cocaine saturated plug of cotton wool, which I renew (or rather replace with a fresh plug) about every half hour, until fair dilatation has taken place

2 In cases in which the labor progressed so slowly that some assistance is needed, and yet the cocaine need not as yet, be deposed in favor of chloroform, the form in which I have found ergot of most benefit has been as a hypodermic combination of sclerotic acid, gr ⅙, and bimeconate of morphine, gr ⅓ By means of Burroughs's tabloids I have been thus able to secure a certain degree more of uterine action, and with the bimeconate of morphine combined with the sclerotic acid and the internal application of the cocaine, have now seen many cases of almost absolutely painless dilatation of the os

3 But of all uses for cocaine in connection with first labors, I have obtained the most gratifying results from the application of a 12 per cent solution to the vulva and inside of the vagina during the slow progress of a case of marked perineal rigidity I do not, of course, mean that the case is hastened much but I do mean that the pain is lessened to an extraordinary degree

4 My observations lead me to conclude that it is chiefly in primiparous (slow) labors that cocaine is of use (notably in breech cases), or in any case possibly in which the os dilates slowly and the perineal rigidity is well marked

5 In cases in which the os has to be dilated by tents, I have soaked and partly enlarged the tents in a hot oleaginous solution of the alkaloid before introducing them, with, as I think, considerable success, and in cases of tender and irritable vaginæ in which, for any reason, the speculum has to be used (gynecological cases), I have adopted the practice with great advantage of previously painting the vaginal walls with the solution of cocaine in castor oil before alluded to —*British Medical Journal*, April 30, 1887

OSMIC ACID IN SCIATICA —NEUHER first suggested osmic acid as an anti neuralgic remedy, and published the results of three cases, two of sciatic neuralgia, and one of the facial From ten to twenty-five injections were required to effect a cure *Eulenberg obtained three radical cures and four* ameliorations out of twelve cases Many others have used it with very much the same results, *i e*, with benefit in some cases, and without benefit in others Dr Stékoulis has tried it in twelve cases (six men and four women) of idiopathic sciatica, the duration of which varied from fifteen days to two years The result of the treatment was eight successes, one much improved, and one in which the remedy proved inert, after four injections, beyond which the patient refused to go Its effect is explained by the well known effect of osmic acid on certain constitutents of nerve tissue *No abscesses nor other* inconvenience followed its use beyond the pain at the time of the injection An aqueous solution, containing 1 per cent of acid, is generally used, of which about sixteen minims are injected It stains the skin and clothes black The injection should be made *loco dolenti*, at first daily, and then less frequently —*London Medical Record*, May 16, 1887

PUNCTURE AND INJECTION OF ETHER AND IODOFORM IN PURULENT ABSCESS OF THE BUTTOCKS —At a recent meeting of the Paris Surgical Society, M TRELAT reported a case of purulent abscess, successfully treated by puncture and injection of ether and iodoform The patient, a girl aged 17, had been attacked with typhoid fever eighteen months previously, and the abscess was diagnosed as necrobiotic, consecutive to vitreous alternation of the muscular fibres A puncture was made, which gave issue to 45 grammes of pus, and 90 grammes of ether and iodoform were injected into the cavity M Trélat asked whether simple abscesses might not be treated in the same way M Terrier thought that in cases like that cited by M Trélat simple puncture was sufficient M Championnière has found iodoform very irregular in its effects, and objected that the injection of this substance in ether constituted a long and painful treatment M Dentu had obtained better results with alcohol and chloride of zinc M Trélat, in his reply to these objections, *stated that it was important* in an æsthetic point of view, to avoid the cicatrix which always remained after an incision, and this was practically accomplished by puncture and the injection of iodoform —*London Medical Record*, May 16, 1887

[14] Marigliano, Roberts Jahresbericht, p 313 Therapeutic Gazette, October 15, 1885

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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THE ILLINOIS PRACTICE ACT

On June 15th the Illinois Legislature passed a bill for an amended medical practice act Though the wording is different in almost every section, the bill as passed is very similar to the original practice act, passed in *1877* *The chief difference is to be* found in Section 10 of the new act, which reads as follows

Any person shall be regarded as practicing medicine, within the meaning of this act, who shall treat, operate upon, or prescribe for any physical ailment of another But nothing in this act shall be construed to prohibit service in cases of emergency, or the domestic administration of family remedies

As before, this section is inapplicable to surgeons of the Army, Navy, and Marine Hospital services The other amendments to the old practice act are, the doing away with the "ten years' practice" clause, fixing a fee of $20 for the examination of non graduates (which fee is returned if the applicant fail to pass the examination), and giving the State Board of Health power to license itinerant vendors (the fee being $100 a month)

In connection with this subject may be mentioned the case of George J Williams *vs* The people of the State of Illinois, error to Criminal Court, Cook Co , recently decided by the Supreme Court, opinion delivered by Judge Sheldon, and the judgment of the lower court affirmed Under the practice act of 1877, Williams was fined $200 for practicing medicine illegally It was held by the attorneys of the plaintiff in error that the act under which the conviction was had is unconstitutional Judge Sheldon said "We do not understand the act to be challenged in this respect in the regard of its feature of prescribing qualifications for the practice of medicine It is the common exercise of legislative power to prescribe regulations for securing the admission of qualified persons to professions and callings demanding special skill And nowhere is this undoubtedly valid exercise of the police power of the State more wise and salutary, and more imperiously called for, than in the case of the practice of medicine It concerns the preservation of the health and lives of the people But the constitutional objection which is urged against the act is that it is special legislation The special feature which is claimed is the proviso to the act, which is, 'Provided, that the provisions of this act shall not apply to those that have been practicing medicine ten years within this State This proviso does not confer upon the ten years' practitioners any special privilege, immunity or franchise It does not confer upon them anything, it leaves them as they are

"But it is said the act is one to regulate the practice of medicine, and that it subjects to regulation only a class, to wit graduates with diplomas and applicants for a certificate of examination, while the ten years' practitioners are not subjected to any regulation at all, by anything in the act It becomes proper to look and see what the provisions are The first clause of the act is as follows 'Every person practicing medicine in any of its departments, shall possess the qualifications required by this act' All the other provisions of the act as we view them, only *respect such qualifications, with the exception of one* section, which requires any itinerant vender of any drug or nostrum, ointment, etc , to pay a license of $100 a month It was within the province of the legislature to prescribe what should be the qualifications for the practice of medicine, and what the mode in which they should be determined The act provides as to a graduate in medicine with a diploma, that he may practice upon his diploma, it being verified as pointed out by the act In regard to others, it is provided they shall undergo an examination before the State Board, or Board of Examiners, and may practice upon the certificate of the Board As *respects the proviso, we regard it in the light of but* prescribing a qualification, that ten years' practice within the State should constitute a qualification for practicing medicine

"It is virtually conceded in the argument of appellant's counsel, that the general assembly might make the qualification of ten years' practice prior to the act, equal to the qualification of a diploma or certificate of examination, and that the proviso might have been un-

objectionable had it been limited to the provisions of the act in respect of qualification—that its vice is in saying, that 'the provisions of this act,' that is, that not its provisions in respect of qualifications, but each and every of its provisions should not apply to the ten years' practitioners And it is said that there is one section which regulates practitioners in respect to conduct, giving the power to exclude them from practice for unprofessional or dishonorable conduct, and that this is a provision from which the ten years practitioners are, by the proviso, exempted This section referred to is that the Board may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, or may revoke certificate for like causes

"As respects the objection of this provision unjustly discriminating between classes of practitioners, we regard it but as a regulation pertaining to qualifications for admission to practice It certainly is such, as regards applicants for admission, and as respects those who had been admitted to practice on the Board's certificate, the provision essentially is that where there has been abuse of the license granted, by having been guilty of unprofessional or dishonorable conduct, the licensing Board may revoke the license which they had granted All is really but in regulation of admission to practice upon the certificate of the Board It has no application to ten years' practitioners, as they are not admitted to practice upon the Board's certificate, but they are, by the act itself, licensed to practice The propriety of the provision as regards the holders of certificates, in making their certificates subject to revocation by the Board for unprofessional and dishonorable conduct, we do not regard as involved in this case, or that we are called upon to express any opinion thereon Appellant has no grievance in this respect He has not had any certificate revoked, has never received a certificate, or been licensed to practice And if, in this particular, the act could be regarded as unconstitutional, we would not hold the entire act, for that reason, to be void, or to be so, in so far as it bears upon the appellant

"It is assigned for error that there is no evidence in the record tending to show that appellant had not complied with the requirements of the law, and had not practiced medicine ten years previous to 1877, and in refusing to instruct the jury that the burden was on the prosecution to make such proof

"The case comes within the general rule upon this subject which is laid down by Greenleaf 'But where the subject matter of a negative averment lies *peculiarly within the knowledge* of the other party, the averment is taken as true, unless disproved by that party Such is the case in civil or criminal prosecutions for a penalty for doing an act which the statutes do not permit to be done by any persons, except those who are duly licensed therefor, as, for selling liquors, exercising a trade or profession, and the like'" Judgment was affirmed

THE JOURNAL

The present number of THE JOURNAL commences the fifth year of its publication and the ninth volume And, what is of more importance, it contains a material increase in the number of its pages, and other marks of improvement, justified by the increased income of the Association during the past year The same circumstances that have justified the addition of more pages of reading matter have also enabled us to make reliable arrangements for additional work in all departments of journalism The first sixteen or eighteen pages of each number of this volume will be occupied mostly by the addresses and papers presented at the recent meeting of the Association, not, however, to the entire exclusion of valuable papers from other sources, but we shall endeavor to secure more attention to selection of the more valuable items in the proceedings of active Medical Societies in all parts of our country, more prompt, though brief, notices of new books, greater variety in the leading or editorial articles, and careful noting of important sanity measures and of attempts to regulate medical education and practice by legal enactments

In the last number of Volume VIII, June 25, we gave the full record of proceedings of the thirty-eighth annual meeting of the American Medical Association, including two or three reports containing matters of more than usual interest, and which we hope will attract the attention of every reader To some of these we shall have occasion to refer more at length before the time to commence arrangements for the next annual meeting

WASHING OUT THE STOMACH

In an article in *L'Avenir Medical*, DR LEFRANC condemns the indiscriminate use of the tube so much in fashion at the present time for washing out the stomach and for feeding in certain cases, as the frequent introduction of any instrument into the stomach, however pliable or inoffensive it may appear, must after a time prove injurious to that organ

Washing out the stomach has been practised in two principal forms of dyspepsia the putrid, and in

that form known as dilatation of the stomach In the first case, the object is to remove the putrid and fermented matters lodged in the stomach In the second, the object is to promote the contractility of that organ, the effect of which is supposed to be analogous to that produced by a douche on the striated fibres of the voluntary muscles But, besides the analogy not being quite applicable to the smooth fibres of the stomach, the results predicted by those who have been instrumental in introducing this mode of treatment into practice have not been confirmed by clinical experience Dr Lefranc suggests that when it is proposed to determine on the stomach of a dyspeptic a profound and durable curative action, it should be remembered that the gastric mucous membrane is in such cases in a permanent state of catarrh, more or less intense, and that it is loaded with ferments But the stomach itself possesses a fermenticide much more efficacious than washing it out, an operation which, as has been already observed, is far from being inoffensive, and is sometimes followed by the most disastrous results, and even by death this is the physiological gastric juice in sufficient quantity The best means by which to combat or prevent the formation of ferments in digestive trouble is by adopting the neurasthenic medication which acts directly on the stomach, of which the spasms and nervous gastric symptoms are calmed, and the glandular function of the organ is stimulated or rectified To fulfil these indications the bitter tonics, such as calumba, nux vomica and quassia, are the most effectual remedies

HYDROCHLORIC ACID SOLUTION IN DYSPEPSIA — In connection with the treatment of affections of the stomach, we may note that DR TALMA asserts that he has employed with advantage, hydrochloric acid in the proportion of 1 gramme to 750 grammes of water This is the strength for adults, and the solution should be made lukewarm, and taken in small quantities in the twenty-four hours The best effects are produced, particularly when the remedy is taken after each meal The diet should be attended to fat should be excluded, and contrary to precedent Talma does not prescribe milk for chronic catarrh nor for ulcer or cancer of the stomach Hydrochloric acid not only prevents the fermentation of the contents of the stomach, but by its antiseptic action it has also a beneficial influence on the coats of that organ In nervous patients, or those showing a peculiar susceptibility to the action of hydrochloric acid, Dr Talma begins by employing alkalies before administering the acid In another series of cases, in which despepsia was caused by cerebral anæmia, as in pregnant women, Dr Talma has obtained good results by the employment of nitro glycerine in doses of 1 milligramme in the twenty four hours But before Talma, Trousseau had long ago prescribed hydrochloric acid in the treatment of dyspepsia, and many specialities of the present day, owe their success in diseases of the stomach to the presence of this acid

FUNDS FOR THE NINTH INTERNATIONAL MEDICAL CONGRESS

At the recent meeting of the Executive Committee of the Congress, it was directed that all receipts from membership fees be reserved for the publication of the transactions, and the $10,000 appropriated by Congress, with so much of the moneys donated by individuals, medical societies, etc , as may be necessary, may be used for preliminary printing and for the accommodation and entertainment of the Congress At a recent meeting of the Illinois State Medical Society an appropriation of $750 was made, at the meeting of the American Medical Association, $1,000, at the meeting of the Kentucky State Society, $250, and the Faculty of the Medico Chirurgical College, of Philadelphia, contributed $100 These contributions added to those previously reported, give assurance that the financial interests of the Congress will be well sustained

THE BUREAU OF GENERAL INFORMATION, WASHINGTON, D C —Physicians and others who desire to obtain information and references from the library of the Surgeon General's office, or from any other sources in Washington, will find it to their advantage to communicate with the Manager of this Bureau, Joseph B Marvin, P O Lock Box 379, Washington, D C

SOCIETY PROCEEDINGS

ASSOCIATION OF AMERICAN PHYSICIANS

Second Annual Meeting, held in the Army Medical Museum Building, Washington, June 2 and 3, 1887

THURSDAY, JUNE 2—FIRST DAY

The meeting was called to order by the President, DR S WEIR MITCHELL, of Philadelphia, who delivered a brief address in which he referred to the purposes of the Association He reported the death of three members, Dr Thomas F Rochester, of Buffalo, Dr Thomas A McBride, of New York, and Dr E Darwin Hudson, Jr , of New York

DR R PALMER HOWARD, of Montreal, read a paper on

CIRRHOSIS OF THE LIVER IN CHILDREN

He reported two cases in which cirrhosis of the liver was present in children, brother and sister He exhibited sections of the organ

DR WM A WEICH described a case of cirrhosis in a child twelve years of age He came from the coast of Africa and suffered with malaria Both the liver and spleen were deeply pigmented The clinical features of the case could not be obtained Most of the cases of cirrhosis of the liver of malarial origin have been reported from the coast of Africa

DR F FORSHEIMER, of Cincinnati, had seen two cases that may possibly be called cirrhosis One was that of a child of eight years At the autopsy the characteristic hob-nail liver was found In this case he considered the cirrhosis due to syphilis The second case is now under observation, the patient being in the last stage of cirrhosis In this case there is a history of syphilis and the child has hereditary syphilis of the nervous system To his mind it is clear that syphilis is the most common cause of cirrhosis of the liver in children

DR WILLIAM PEPPER, of Philadelphia, reported a case in which cirrhosis of the liver followed measles in a child eight years of age During the attack of measles, there were symptoms of hepatic disorder as shown by occasional attacks of catarrhal jaundice Subsequently the symptoms of developing cirrhosis made their appearance and death in a comatose condition finally occurred The whole duration of the case could not have been less than a year At the autopsy a typical hop-nail liver was found

DR JOHN GUITERAS, of Charleston, S C, read a paper entitled

OBSTRUCTIVE SAFETY-VALVE ACTION IN THE HEART, AND DIRECT FUNCTIONAL MURMURS

In a previous paper on malignant endocarditis the author had dwelt upon the significance of mitral direct presystolic murmurs, which were proven by the autopsy to be unconnected with any lesion of the mitral orifice The lesions were those of intense aortic regurgitation He had attributed the murmurs to the recoil of the blood upon the mitral leaflets holding them tense against the stream of blood coming from the auricle In the opinion of the late Dr Flint, direct functional mitral murmurs were limited to a small number of cases of aortic regurgitation, but the author thought that the functional mitral murmurs were not so rare Obstructive functional murmurs are common in aortic regurgitation

Pulmonary systolic murmurs are more frequent than any other form of cardiac murmurs In examining one hundred consecutive cases, he had found in sixty-two, systolic, pulmonary artery murmurs In these the murmurs were present during tranquil breathing or during respiration in such a way as to produce changes in the pulmonary circulation If account is taken of the bruits heard in this region the proportion becomes greater The clearness with which these murmurs are heard depends upon the proximity of the artery, the thinness of the chest walls, the nature of the surroundings, and finally the proximity of the main trunk to the capillary distribution Systolic pulmonary murmurs can be developed in the majority of healthy individuals, if we exclude those with thick chest walls and those who are not intelligent enough to modify their breathing as directed The author held that such a murmur was a dynamic, obstructive valvular murmur, and is produced by the effect of changes of blood pressure upon the semilunar valves A certain degree of pressure in the artery must tend to prevent the opening of the valve This causes a slanting position of the valves, and a narrowing of the orifice, with the production of a sonorous whirl The fact that such murmurs are not more frequently developed at the aortic orifice is due to the greater power of the ventricle and the wider distribution of the systemic circulation There are, however, cases in which increased arterial tension is expressed not only by accentuation of the aortic second sound, but by an aortic systolic murmur He had heard it in atheroma, and in Bright's disease, where there was no marked anaemia Pulmonary artery murmurs as heard in ordinary breathing is confined to the expiratory act and is broadest at the beginning of the act The murmur is sometimes only heard with the first beat that occurs with expiration In order to further develop this murmur, it is only necessary to arrest respiration It is better to stop breathing during expiration, especially at the end of normal expiration A full expiration makes the murmur louder At the end of inspiration, it is more difficult to develop the murmur, for several reasons 1 because it requires entire arrest of respiration to produce engorgement of the main trunk, 2 because prolonged inspiratory effort is accompanied by a continued hum of the intercostal muscles, 3 because the expansion of the lung interferes with the transmission of any murmur that may be present A slight murmur is frequently heard in inspiration if the arrest of breathing is pushed fast enough The speaker asked, are we not justified in assuming that there is a safety valve action in this attitude of the pulmonary valve, which together with the leakage at the tricuspid orifice, tends to prevent engorgement of the lungs by the retardation of the flow of blood in the systemic veins, so that continued for a time it does no harm? In reference to the murmurs of anæmia, the author thought that they were due to some disturbance of the apparatus In this condition there is a marked reduction in the quantity of blood, the valves require a certain amount of expansion of the vessels in order to allow them to apply themselves to the walls Venous hums and basic murmurs he thought to be of valvular origin

DR A L LOOMIS, of New York, remarked that we should recognize that murmurs within the heart cavities are due to many different causes The obstructive mitral murmur referred to, were, he thought, of frequent occurrence in connection with aortic diseases where there is dilatation and feebleness of heart power, but on autopsy he had always found such changes in the mitral valves as seemed to account satisfactorily for the murmurs heard He had

heard the murmurs so readily produced during respiration, but where these murmurs have been persistent, he had always found conditions of anæmia and failure of the right heart It seemed to him that the explanation is either hæmic or failure of heart power We shall as we study the cases more, find that they are due not so much to changes in the valvular orifices as to changes in the heart cavity, and in the heart walls Murmurs have come to be of very little pathological significance to him unless there are other changes associated with them The worst cases of heart disease he had met with have had the simplest and least distinct heart murmurs

Dr L T Bruen, of Philadelphia, reported a case of severe anæmia in which there was great relaxation of the muscular system, so much so that as the arm hung out of the bed, there was a venous pulse at the back of the wrist This was attributed to relaxation of the capillary vessels to such an extent as to permit the systolic impulse of the left ventricle to force the blood through the capillaries into the veins In this case there were murmurs at each of the valves of the heart As the anæmia improved and the crasis of the blood was restored, the venous pulse disappeared and the murmurs gradually lessened and the man has now no murmur whatever

Dr F P Kinnicutt, of New York, said that it has been claimed by certain observers that pulmonary systolic murmurs are transmitted from the mitral valve into the auricular appendage The condition required that this may occur is said to be dilatation of the appendage causing it to approach the chest wall In some anatomical examinations made a few years ago he found that in the normal condition the auricular appendage was concealed beneath the pulmonary artery, and when fully dilated its tip only could be seen beyond the edge of the artery It was even then one and a half inches from the internal surface of the chest

Dr F C Shattuck, of Boston, remarked that when auscultation was first introduced all cardiac murmurs were considered of bad omen It was then discovered that many systolic murmurs were practically *of no importance* We are now finding out that all diastolic murmurs are not of evil import and that they may be transitory and functional A murmur by itself is next to nothing, there must be something beside the murmur to make it of much importance

Dr Samuel C Chew, of Baltimore, said with reference to the diagnosis between aortic regurgitant and mitral direct murmurs, that the diagnosis can usually be made by attention to the following points An aortic diastolic murmur although it may be intense at the apex, becomes manifestly louder as we reach the right side of the sternum in the second intercostal space It will then occupy the whole diastole If the murmur is mitral in origin it generally will be also heard in the scapular region The aortic murmur is not apt to be heard in the latter situation

Dr Beverly Robinson, of New York, had occasionally found in acute strain of the heart, murmurs which unquestionably had nothing to do with organic changes in the heart, and can not be explained as due to any special modification in the blood The murmurs seem to be due to more or less acute dilatation or obstruction of the mitral orifice

Dr Israel T Dana, of Portland, Me, had under observation two sisters The mother died of organic heart disease Both of these sisters have had a mitral regurgitant murmur In the older sister the murmur after remaining five or six years disappeared It remained absent for one or two years and then returned, and has continued for the past two or three years In the second case, the murmur after having been present for five or six years disappeared, and has since remained absent He asked if it were possible that a murmur connected with organic heart disease should disappear with improvement of the health and reappear when the health again fails?

Dr Hosmer A Johnson, of Chicago, read a paper on

PNEUMATIC DIFFERENTIATION

In the absence of the author the paper was read by the secretary The author had compared the results obtained by the cabinet with those obtained by the Waldenburg apparatus, and he held that the former accomplished no more than the latter The pneumatic cabinet he considered cumbersome and expensive, with nothing especially to commend it in the treatment of pulmonary diseases

Dr John S Billings, U S A, read a paper on *Methods of Literary Research*

AFTERNOON SESSION

Dr H C Wood, of Philadelphia, read a paper on

THE ANTIPYRETIC TREATMENT OF FEVER

He had prepared certain propositions which he read and then gave what he thought to be the proof of their correctness *First*, Fever is a disturbance of calorification in which through the influence of the nervous system, heat dissipation and heat production are both affected If there be a fever which is produced by the direct action of a poison, independently of the nervous system, we have at present no proof of its existence In his experiments the agent used to produce the fever has been the pyrogenic principle found in ordinary commercial pepsin

Second Heat production is regulated by a nervous apparatus, our knowledge of which is still imperfect There is certainly an inhibitory centre which depresses or controls the production of heat It probably does this by acting upon the trophic cells of the gray matter of the spinal cord It is possible, also, that there is a centre which, when excited, increases tissue change, but its existence has not yet been proven The speaker than gave a resumé of the experiments which he had performed, which, in his opinion, proved the truth of the above proposition

Third Heat dissipation is regulated through the vaso motor system, so that vaso motor paralysis is followed by an enormous loss of animal heat, and under unfavorable circumstances by death from cold If section of the cord is made in such a way

as to get vaso motor paralysis without destruction of the respiratory centres, the heat dissipation rises enormously If the animal is kept in a temperature of 50° or 60° it dies in a few hours of progressive loss of heat If kept in a warm chamber it lives for days The cause of the rapid heat dissipation is the opening of the blood vessels of the surface of the body

When these remarks are applied to a study of antipyretics, it is seen that drugs may lower bodily temperature in health or in fever by increasing heat dissipation In this way act all agencies which cause vaso motor paralysis Antipyretics acting in this way may be called false antipyretics Then it is conceivable that there may be drugs which act on heat production through the inhibitory nerve apparatus, of which mention has been made Such drugs may for convenience be called true antipyretics Aconite veratrum viride and drugs of that class belong to the false antipyretics Whether or not there are any true antipyretics has been a question which we have been unable to answer With regard to antipyrin, certain experiments made in the University of Pennsylvania, seem to give some positive results Care must be exercised in these experiments not to confound a normal defervescence with the action of the drug administered *In the dog the use of antipyrin* diminishes both heat production and heat dissipation, the former being diminished more than the latter It is probable that heat production is primarily affected The question arises whether this result is due to an effect on the circulation? He had found that antipyrin had no effect upon the circulation The blood pressure was uninfluenced by its administration He therefore concluded that the action of antipyrin upon the bodily heat was entirely independent of any action upon the circulation, and the probabilities are, of course, that it acts through the nervous system Beyond this our present knowledge does not extend

DR FRANCIS MINOT, of Boston, read a paper on

THE TREATMENT OF TYPHOID FEVER BY ANTIPYRIN AND THALLIN

The paper was based on the observation of twenty-four cases treated in the Massachusetts General Hospital, the object of the study being to ascertain the proper dose of the drugs, their general and specific effects upon the patients, the results from their continued use as compared with those from their occasional employment, any unfavorable results, and the general effect of antipyrin and thallin upon the course of the disease

The following conclusions were reached 1 Both antipyrin and thallin have a remarkable power of reducing the temperature in typhoid fever 2 In no case was the use of these refrigerants apparently followed by any unfavorable effect upon the course of the disease 3 The general condition of the patient was more comfortable after taking antipyrin and thallin, which were often followed by sleep 4 The refrigerant medication by antipyrin and thallin appears to have no specific or decided effect upon the course or issue of typhoid fever It often contributes much to the patient's comfort, perhaps indirectly promotes his safety 5 The effect of antipyrin and thallin in promptly lowering the temperature shows that the danger in typhoid fever does not consist in high temperature alone, and that the latter is rather an index of the violence of the abnormal condition which we call fever, though, perhaps, adding somewhat to the danger 6 By the internal use of antipyrin and thallin, all the effects which are claimed for the treatment of typhoid fever by the cold bath are readily obtained without the trouble and inconvenience of the latter method, and without exposing the patient to the dangers of exhaustion and shock, consequent on the fatigue of removal from bed 7 These remedies may be given without danger to the youngest patients in suitable doses, and indeed, their beneficial effects are more decided and the unfavorable consequences are less observable than with adults

DR I E ATKINSON, of Baltimore said that, as regards the relative merits of antipyrin, and antifebrin, he thought that the tendency to chilling after the use of thallin is decidedly greater than after the use of antipyrin, while the latter is more apt to produce nausea and vomiting He disagreed with the statement that the use of these drugs can take the place of the external application of cold water Although with antipyretics we can reduce the temperature at pleasure, yet the duration of the case is not lessened, and in some cases it has been thought to have been prolonged

DR GEORGE L PEABODY, of New York, had found that a certain proportion of cases which do not bear the cold bath will bear the use of antipyretic drugs, while on the other hand, the bath may be used in a certain number of cases in which antipyretics cannot be applied From clinical experience, he was convinced that the cold bath accomplishes more than the simple reduction of temperature Its soothing effect upon the nervous system is greater than that accomplished by the reduction of temperature by antipyretic drugs Another important matter is, that since the introduction of these methods of antipyresis, the number of relapses seem to be greater and more fatal

DR WM M WELCH said that there is comparatively little evidence that the grave symptoms of fever are referable to the elevation of temperature There is no doubt that temperature of 110° to 113° produce serious symptoms, but whether or not ordinary temperatures of 105° to 107° exert any serious action on the body, is a question which is certainly unsettled It has been shown that rabbits can be kept in a box with a continuous rectal temperature of 107° for at least two weeks, provided the precaution is taken to keep the box well ventilated, and the animals supplied with moist food Patients may have a perfectly clear brain, and no grave symptoms with a temperature of 106° or 107° On the other hand, there are severe and fatal cases of typhoid fever in which the temperature has never registered a great height While in most cases there is a certain proportion between the height of the temperature and the severity of the disease, yet there are

certain cases where this proportion does not exist

Dr William Pepper said, that the action of these drugs seems to be purely through the nervous system He had seen no effect upon the circulation, upon the respiration, or upon the secretions save that of the skin Some of his observations have been of interest with reference to the relative value of the external use of cold water and the internal use of antipyretics In the sudden acute pneumonia of children with a temperature of 106° or 107° with initial convulsions, where the prompt and repeated use of cold baths has been without gratifying results, full doses of either of these antipyretics have produced a remarkably successful effect As to the ability of these agents to replace cold baths under all circumstances, the evidence is not adequate In the sudden hyperpyrexia occurring in the course of rheumatism, he was not prepared to accept the view that these drugs are capable of replacing the cold bath In these cases we have direct evidence that the high temperature is the direct cause of the symptoms at least of the severe nervous symptoms

Dr George B Shattuck had used both antipyrin and antifebrin largely, and it seemed to him that antifebrin offers all the advantages of antipyrin without its disadvantages It has none of the disadvantages which belong to thallin Three or four grains of antifebrin accomplishes the same results as are produced by a larger dose of the other drugs With reference to the point suggested by Dr Welch, he said that whether pyrexia is or is not a dangerous feature of the disease, we find clinically that where a patient has high fever, is irritable and uncomfortable, the administration of one of these antipyretics or the external use of cold water produces a tranquil and refreshing sleep, and the patient awakes in a condition much better to continue the struggle with the disease

Dr J C Wilson, of Philadelphia, referred to a recent observation which he had made as bearing on the question of heat dissipation He had lately been treating a case of typhoid fever, in which from time to time, antifebrin in 5-grain doses was given These were repeated whenever the temperature reached 104° This caused copious sweating with the usual reduction of temperature, amounting to 3½° or 4° On the last occasion $\frac{1}{96}$ of a grain of sulphate of atropia was given with the antifebrin No sweating occurred and the temperature was reduced only 1½°

Dr James T Wittaker, of Cincinnati, differed from those who seem to accept the view that fever is a neurosis We have no proof that the nerve centres are distinctly irritated, and we have no proof that the agents which reduce fever act directly on the nervous centres Is it not more probable, he asked, that the antipyretic action is really an antimicrotic action? We have some observations which go to show that the disease is caused by bacteria, or if not directly by bacteria by some of their products, the ptomaines Would it not be more rational to study the habits of these bacteria and address ourselves rather to the removal of the cause than to the counteracting of the effects?

Dr H M Lyman, of Chicago, was disposed to regard the great value of antipyretics as proceeding not so much from their power to reduce temperature as from their general effect, especially upon the nervous system He regarded them as valuable adjuvants in the treatment of disease, largely from their hypnotic and tranquilizing effect upon the nervous system to which allusion has already been made He had observed that in many instances in which in abrupt febrile affections relief has not been secured from antifebrin and antipyrin, this failure is frequently due to the presence of the condition we call rheumatic, and then salicylic acid gives the relief that we fail to get with the antipyretics

Dr John Guiteras said, that in treatment of the continued fevers of warm climates the results have been rather negative, and have showed the advantage of stopping the use of these drugs after they have been continued for a certain length of time He had been called in consultation where the drug had been continued for ten or fifteen days, each time that it was given producing a certain reduction of the temperature but having no permanent benefit, and the patients had begun to improve as soon as the drug was stopped The effect of cold water baths in these continued fevers of the South had seemed more beneficial If continued for two or three days they often favorably modify the course of the disease

Dr George L Peabody said, there was no question in his mind that a considerable proportion of cases of typhoid fever can be aborted by antiseptic treatment of the intestinal ulcers with naphtholin or resorcine For the last two years he had treated all cases coming under observation during the first ten days of the disease with a calomel purge (10 grs) followed by naphtholin in such doses that at least 70 or 80 grs are taken during the twenty four hours Under this treatment he had succeeded in aborting many cases in which the symptoms were quite pronounced

Dr James Tyson, of Philadelphia, reported a recent case of rheumatism, in which the temperature suddenly went up to 105°, with alarming brain symptoms Antifebrin in 5 grain doses failed to produce any effect The patient was then put into a cold bath, and the temperature of the water gradually reduced to 72° The discomfort experienced by the patient then prompted his removal from the bath The thermometer in the rectum showed a reduction of only ½°, but within the course of half an hour the temperature fell 3° The fall in temperature was followed by a disappearance of all the symptoms and the recovery of the patient

Dr Henry Hun, of Albany, reported some

CASES OF SEWER-GAS POISONING

The author reported in detail the histories of twenty-nine cases coming under his observation, in which various diseases appeared to have been due to the inhalation of sewer gas He thought it probable that the following diseases may result from severe gas poisoning vomiting and purging, separately or combined, general debility, fever, sore throat of a

diphtheritic type, neuralgia and perhaps, also, myelitis of the anterior horns These conditions are frequently combined Fever is frequently associated with the other symptoms There is one group of symptoms which is almost always present, that is loss of appetite, extreme prostration and pain in the head When this occurrs as a chronic condition we are justified in suspecting that the patient is suffering from sewer gas poisoning

DR ISRAEL S DANA, of Portland, Me, reported

A CASE OF ANEURISM OF THE ABDOMINAL AORTA

A man of 30, of previous robust health, was found August 6, 1886 emaciated, feeble, anemic, dyspeptic and with very frequent, unsteady and irregular pulse The most prominent symptom was a constant sensation of throbbing and pulsation centering in the epigastrium In August, 1884, he fell ten feet, striking on small of back, but felt as if hurt internally The sore spot remained Gradual deterioration of health occurred, until in latter part of June, 1886, he was utterly incapacitated from all labor Exploration of abdomen anteriorly revealed the existence of a small equably expansile tumor just above the level of the umbilicus Distinct blowing sound On examination posteriorly, there was found a distinct independent centre of motion and sound The sound was double, sharper and more intense than that heard in precordial region, and possessed a well-marked "booming" quality Diagnosis of small traumatic aneurism of abdominal aorta just after its passage through diaphragm was made Treatment consisted of absolute rest in bed for two months, restricted diet of bread, meat, milk and cocoa, limited amount, iodide of potassium 20 grs four times a day Immediate improvement ensued within first week, and continued gain in power, till by the middle of November he could walk and ride about carefully On May 9, 1887, physical examination revealed anteriorly, the existence of the aneurismal mass, perhaps a little diminished in size, while the blowing sound was scarcely audible The impulse and expansion were markedly reduced On examination posteriorly, the independent centre of pulsation and double sound was found, but both motion and sound were greatly reduced in amount, and the booming quality was gone

The chances of final complete recovery were not considered encouraging circumstances of patient not favorable to such rest, recreation and tranquility of mind as might be desirable, and even with all external conditions at the best there would yet be too many dangerous liabilities remaining, such as embolism, pyæmia, atheromatous, degeneration, etc The quick improvement under treatment is noticeable The patient himself attached great value to the iodide of potassium which he still takes, feeling so much better while taking it that he is unwilling to leave it off

(To be concluded)

FOREIGN CORRESPONDENCE

LETTER FROM STRASSBURG [1]

Prof E Fischer—Spiral Growth of Organs—Apparatus for detection of Spinal Curvature—Prof Luecke—Resection of Intestine for Gangrene—Fæcal Fistula—Ectopia of the Bladder—Stimulants in Pyæmia—Antisepsis—The Burger Hospital—Prof Freund—Septicæmia and Antisepsis—Hairpin Tumor—Von Recklinghausen—The Pathological Institute—Tumors of the Pancreas—Myositis Ossificans

Dear Doctor Fenger —Having completed my mission in Paris, I came directly to Strassburg, where I arrived April 1 My first call was on Prof E Fischer, who had just returned from Berlin, where he had spent five months in studying specimens in the different museums with reference to spiral growth, a subject to which he has called the attention of the profession in a lengthy monograph from his pen. Prof Fischer, who is well and favorably known in German surgical literature, is a good example of German industry and enthusiasm The doctrine which he advanced some time ago, that all organs during their growth, assume a spiral shape something like a cork-screw, and that the spiral curves always take a definite direction, right or left, according to their anatomical relations to the central axis, had to be demonstrated more thoroughly for his own satisfaction and for the purpose of giving this principle a practical application To do this he obtained a leave of absence, and for five months, at considerable expense, he studied his favorite subject in the different embryological, anatomical and pathological collections in Berlin The results of these researches have only served to confirm his views, and he has been able to show that in the fecundated ovum the spiral growth becomes apparent after the third segmentation, and that even the protoplasm in each individual cell is arranged in a spiral manner For more than two hours I listened patiently and interestedly to his remarks, and examined the specimens which he has utilized in illustrating his monograph As striking illustrations of spiral growth, he calls attention to the structure of the umbilical cord, the heart, the long bones, the bladder and the nerves Many deformities he attributes directly to an increase or dimunition of normal spiral curves, so for instance scoliosis and germ valyum and varum Professor Fischer has devoted a great deal of time to a study of lateral curvature of the spine, and has invented a most ingenious apparatus which enables him to detect a very slight degree of deviation, and thus resort to appropriate early treatment The patient is placed upon a platform divided into two equal parts, under each of which a scale is arranged so that when the patient is placed into a perfectly erect position in front of a perpendicular staff, the weight on each side can be accurately ascertained Asymmetry of the lower extremities is recognized as a frequent cause of scoliosis, and the deformity is at once improved, and further aggravation prevented, by supplying the

[1] By permission of Drs Fenger and Senn

shoe on the affected side with a sole of sufficient thickness to balance the length of the opposite limb Prof Fischer is a hard student, a conscientious worker and will not fail in making many more valuable contributions to surgical literature

The surgical wards of the Burger Hospital, in charge of Professor Luecke, are in a separate building, recently erected, and supplied with all modern improvements and conveniences The average number of surgical patients is 150 Prof Luecke, whom I had the pleasure of meeting in 1878, looks very much older, but his working capacity remains unimpaired He showed me a number of exceedingly interesting cases among them a resection of the intestine for gangrene, where twelve inches was removed in a case of strangulated hernia, the bowel sutured and returned The resection was done sixteen days after the herniotomy, a procedure which he prefers to immediate resection, and enterorrhaphy, as the intestine is in a better condition for such a serious operation, at the same time the surgeon is in a better condition to decide how much of the bowel must be removed In this case the wound of the second operation was nearly healed, the action from the bowels regular, appetite good, no tympanitis, all symptoms indicative of a speedy and permanent recovery A woman about 40 years of age, was shown, upon whom a gastro enterostomy had been performed one week ago The dressing was removed for the first time, and the wound was found united The case was considered favorable for a pylorectomy, but a direct examination showed that the disease had extended behind the stomach, rendering extirpation impossible, consequently Wolfler's operation was performed For a number of days after the operation the patient was nourished exclusively by rectal alimentation, at present she was allowed to take moderate quantities of food and experienced no difficulty in digestion The relief afforded by the operation was prompt, and has continued without interruption

In the case of a fecal fistula in a girl about 18 years of age, where all ordinary measures to close the abnormal passage had failed, a favorable result was obtained by opening the abdomen through the median line, separating the bowel from the abdominal wall, and suturing the bowel in the usual manner Attention was called to the importance of opening the abdomen some distance from the artificial anus, as such a procedure affords a better opportunity to ascertain the extent and nature of the adhesions, and affords greater facilities for their separation and the prevention of fecal extravasation during the operation In this case, not a single unpleasant symptom followed the operation

With great interest I examined two cases of ectopia of the bladder Both patients were females, one a child, the other an adult In the child, a number of operations had succeeded in forming a perfect anterior wall, thus converting the imperfect bladder into a convenient receptacle The artificial wall in the woman remained imperfect, which will necessitate further operative interference

I was informed that two cases of pyæmia, where the patients came into the hospital infected, had recovered, after a long illness, under the influence of large doses of stimulants In one case the presence of pulmonary infarcts was unmistakable, and yet complete recovery followed These cases only prove that even in pyæmia, recovery need not be despaired of in cases where life can be prolonged until a period of limitation is reached when the specific cause loses its toxic effect on the organism, is exhausted, and is no longer in a condition to furnish the material for the progressive production of the microbes

The antiseptic treatment in this hospital is rigidly and conscientiously followed, a circumstance which certainly must come in for a great share of the credit pertaining to the remarkable recoveries after the most serious and dangerous operations One forenoon I devoted to a visit to the gynecological and obstetrical wards, under the care of Professor Freund The wards are in a new building only recently occupied, and located *vis a vis* the Surgical Klinik The building is a model of its kind and a credit to the German Government, which has spared no expense in making it perfect as a centre for clinical teaching Professor Freund takes a just pride in the institution which has developed into such a magnificent hospital and school for teaching under his personal supervision, and is untiring in his efforts in pointing out its advantages and modern improvements In the lying in department the antiseptic precautions are so thoroughly carried out that puerperal sepsis has never been known to originate in the wards A small building, isolated from the main building, serves for the reception and treatment of infected patients from the city and the surrounding country, and here the student finds the only opportunity to study at the bedside and the post mortem room the infective diseases incident to childbed

There is certainly a great deal of truth in the statement made by the famous Robert Koch, in answer to my question relative to the nature of septicæmia, that this disease is beyond the grasp of the pathologist in Germany, as antisepsis had succeeded in almost exterminating the disease in that country I sympathize sincerely with the pathologists, but rejoice at the results obtained by Joseph Lister and his followers in expunging from the catalogue of diseases one of the most fatal and fearful complications of the obstetrical and surgical wards In the face of these facts who can doubt any longer the efficiency of antiseptic precautions in preventing infection? Who will dare to ridicule the honest, conscientious surgeon and obstetrician in his efforts to protect his patients against infection? Who will have the courage to recommend a pad of infective germs as a safe dressing for penetrating wounds of the abdomen? Let history, science, and the combined experiences of thousands of honest physicians and surgeons answer these questions

Professor Freund related to me the history of a very interesting case that recently came under his observation A patient was brought into the hospital suffering from all the symptoms of pyosalpinx Abdominal section was performed, and a careful digital exploration appeared to confirm the diagnosis

On one side of the uterus, corresponding to one of the tubes, a hard, adherent mass was found, which was removed entire with great difficulty, on account of firm universal adhesions, in the separation of which severe hæmorrhage was incurred After the mass was removed the large cavity was filled with a tam pon, and all bleeding arrested by compression and ligature Section of the mass revealed in its interior a hairpin This common instrument of destruction had evidently been used to produce abortion, had perforated the uterus and caused the suppurative parametritis—another sad illustration of the folly of women in attempting limitation of offspring

A number of recent laparotomies showed no temperature and were on a fair way to recovery All abdominal operations are performed under strict antiseptic precautions, with the exclusion of the doubtful spray I examined with interest numerous frozen sections illustrating the normal anatomy and various pathological conditions of the female pelvic organs, which were fastened upon a wire framework, according to the device of Professor Freund, and kept as wet specimens You will recollect that Pro fessor Winckel adopted this method of mounting in obtaining his photographic illustrations for his great atlas

A visit to the Pathological Institute brought me face to face with one of Germany's greatest patholo gists, the distinguished von Recklinghausen I found him smoking his morning cigar, but deeply engaged in his arduous work Previous experience satisfied me that the director of one of the best pathological museums would spare neither time nor labor to show me the most interesting specimens I found here the largest collection of specimens illustrative of diseases of the pancreas I was exceedingly anxious to ex amine the specimen of pancreatic calculi with ectasia of the common duct, but when we searched for it where it should naturally belong it could not be found, a circumstance which almost instantaneously changed the placid temper of the professor into a rage Shelf after shelf was examined, but that speci men, in some unaccountable way, had disappeared I suggested that we abandon the search but this only stimulated him to renewed energy, and I heard from behind the cases language more forcible than ele-gant, until the unhappy "devil" of the museum re membered the exact *locus* of the wandering pancreas, and he brought the specimen triumphantly to the ex-cited director, whose countenance at once assumed its wonted tranquil, peaceful aspect The average German professor is a typical representative of sys-tem and order, and the displacement of a specimen is considered in the light of a criminal offense, and, as the learned professor said on this occasion "So etwas darf hier nicht vorkommen "

In a short time three new specimens have been added to the pancreatic collection One of them consisisted of a solid tumor, probably malignant, in the head of the organ, with a large cyst on the peri-pheral side During life only the cyst was recog-nized, and after an exploratory puncture a probable cyst of the pancreas was diagnosticated Professor Luecke performed abdominal section, stitched the cyst to the wound, opened and drained it Next day *exitus letalis* The post mortem examination showed that the primary disease had originated in the head of the pancreas and had involved the adjacent tis-sues, the cyst had been caused, undoubtedly, by progressive destruction of the secretory structures of the pancreas and obstruction of the cystic duct The second specimen is a large cyst, removed post mor-tem, where no communication exists between the cyst and the duct The third specimen represents a primary carcinoma of the pancreas without the form-ation of cysts The more I study the etiology of cysts of the pancreas, the more I become convinced that simple obstruction is inadequate to cause a cys-tic dilatation of the duct, as in such cases, as long as the gland remains intact, the pancreatic juice is ab-sorbed, in other words, a retention cyst cannot be produced as long as auto absorption remains intact But, in cases in which the cause of the obstruction affects deleteriously the parenchyma of the organ, absorption no longer takes place, and the combined effect of obstruction and accumulation of the pro ducts of secretion from intact portions of the gland on the distal side of the obstruction, result in the formation of a retention cyst

This museum contains three beautiful specimens of myositis ossificans In all of them the production of new bone is most marked in the extensor muscles of the back and in the vicinity of the hip joint, in the latter location braces of new bone connect the pelvis with the femur, so that, with an intact hip joint, perfect immobilization of the thigh bone has taken place, always in a flexed position In regard to the true pathology and etiology of this singular disease, little or nothing is known At the meeting of the German Congress of Surgeons recently held in Berlin, Professor Helferich, of Greifswald, showed a young man suffering from this disease who had been under his observation for seven years The disease commenced as an acute attack resembling rheuma-tism, followed in a short time by production of bone along the course of the affected muscles It is more than probable that the ossifying process is limited to the connective tissue around and within the muscles, and that the muscular fibres disappear in consequence of pressure, atrophy, and interstitial absorption on the part of the new osteogenetic material

N SENN

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK

[FROM OUR OWN CORRESPONDENT]

Cancer of the Pancreas—Epithelioma of Penis—Intubation, Feeding after Intubation, Statistics of Intubation, Pathology of Intubation

At a recent meeting of the New York County Medical Association, Dr Thomas C Taylor read the report of a case of *Cancer of the Pancreas*, with infil-tration of the omentum and walls of the stomach, along the greater curvature, occurring in a female of

30 years The case was interesting both on account of the infrequency of the affection and the obscurity of its diagnosis In this case, three important and common symptoms generally regarded as diagnostic of pancreatic cancer jaundice, œdema, and fat in the alvine discharges, were absent Dr Taylor thought Dr Costa's manner of diagnosticating these cases the most feasible—that by exclusion As to the possibility of prolonging life by operation in a case of cancer of the pancreas, if the diagnosis could be made early enough, the two cases reported by Billroth were of much interest, he had made a partial resection of the organ, removing the tail in one and a portion of the head in the other case, but, of course, not injuring the duct Both patients recovered from the immediate effects of the operation, but how long they lived, or whether the disease returned, is not stated Dr Taylor thought that when he first saw his case, but a very small portion of the head was involved, and that if the diagnosis could then have been made, it would have been an excellent opportunity to perform an operation similar to Billroth's

At the same meeting Dr J R MacGregor presented a portion of a *Penis Amputated for Epithelioma* At the operation care was taken to prevent subsequent constriction of the urethra in the stump, and thus far the result was satisfactory The chances were fair that the growth would not recur Dr J W S Gouley said it was of interest that in epithelioma of the glans or prepuce there is always antecedent balanitis or balano posthitis, and most cases occur in persons who have chronic balanitis, this condition being chiefly due to lack of cleanliness In such cases epithelioma develops rapidly, and soon involves both the mucous membrane and the corpora cavernosa In his experience, amputation, as usually resorted to in these cases, is insufficient, and is likely to be followed by a more or less rapid recurrence, which always commences at the end of the stump Atresia urethræ is also likely to be a very unpleasant consequence of the operation, and he related a case in which, although there was no return of the cancer, the patient died within two years from pyelo nephritis due to atresia thus produced In one case of amputation for epithelioma, he first used the écraseur to break up the cavernous bodies Then, leaving the urethra fully three quarters of an inch longer than the stump, he fastened it to the free extremities of the cavernous bodies On account of the frequency of recurrence, he determined to excise the whole penis in his next case, and in April, 1878, he did this operation on a patient 50 years old He dissected out the entire organ, without opening the cavernous bodies, and removed the crura and all About one half of the cavernous bodies had been invaded by the growth The patient was discharged cured within two months, but he knew nothing of the subsequent history of the case It seemed to him that such a radical operation was the *best* safeguard against recurrence, for if the slightest deposit remained the growth would recur In the majority of cases it was not only justifiable, but the most proper measure to adopt It is not a formidable operation, and in his case the patient made a rapid recovery

Dr Bryant referred to three cases of amputation of the penis in his own practice In two the operation was done for cancer involving the glans and anterior portion of the organ, and in the third for general carcinoma, involving not only the penis, but the whole system He believed that the entire removal of the penis is the only ultimately safe procedure But if the growth be very slight, it might be allowable to consult the patient's wishes, and if he object, make the amputation pre scrotal

Intubation was the subject of discussion at the first meeting of the Academy of Medicine in June Dr F Huber's paper was a study of forty-seven cases from his own practice Of these twenty nine, with eleven recoveries, were in children under 3 years of age, and eighteen, with nine recoveries, in children of 3 years or over Of the children under 3 years, one was 9½ months old, one 10½ months, two 11 months, one 1 year, two 2 years, two 2½ years, and two 2 years and 8 months old Of all the children that he had been of late called upon to treat for laryngeal stenosis, he had found it necessary to resort to intubation in only one out of every three or four cases, and he thought it should not be done until dangerous symptoms set in He used it in the same class of cases in which, up to a year ago, he would have performed tracheotomy The dyspnœa is as effectively relieved by intubation as by tracheotomy The utility of intubation was fully established, and it has now passed the experimental stage One of the most serious accidents that can occur is the pushing of dislodged membrane before the tube, and in such a case Dr E D Ferguson, of Troy, performed tracheotomy Several deaths have been reported from this accident, and Dr Waxham has recently devised a long tracheal forceps for removing the membrane in such cases In a case under his care he gave the child brandy, which excited such a fit of coughing as to expel both the tube and the membrane As a rule, the tube can be dispensed with at a much earlier date than the tracheotomy tube If respiration continues free, it should generally be allowed to remain until at least the fifth or sixth day, but if the breathing becomes noisy, it should be promptly removed and afterwards reintroduced, if necessary When there are diphtheritic patches in the nose or pharynx, it is advisable, as a rule, to leave the tube in position until they disappear In intubation, as in tracheotomy, the prognosis is more favorable when there is simply local obstruction in the larynx than in cases of marked constitutional infection from diphtheritic poison No positive prognosis should ever be made until 48 hours after intubation Intubation, he believes, will save many cases in which tracheotomy will not be permitted, and many which would die if the latter were performed, especially in children under 3 years No age appears a contraindication to intubation Of 12 cases in which he had done tracheotomy, 10 died He felt warranted in assigning to intubation a much higher position As regards medicinal treatment, he uses bichloride of mercury throughout the disease, whether intubation were prac

tised or not He gives gr ⅙–ss, and in severe cases gr j, in divided doses, in twenty four hours If there be much dysphagia, he uses tablet triturates, gr $\frac{1}{10}$ each, mixed with sugar, and placed dry upon the tongue With extensive diphtheritic membranes in the fauces he also uses tincture of iron and chlorate of potassium In threatened heart failure he uses brandy, caffeine, etc If the temperature be very high, antipyretics are used, by the mouth or rectum He also uses the steam atomizer to produce a moist vapor

Dr J O'Dwyer read a paper on *Feeding after Intubation* As a rule, solids and semi-solids are taken much better than liquids after intubation In a number of cases he had removed the tube in order to give nourishment, but the results were scarcely better than when it was in position Sometimes swallowing is easier after than before intubation, on account of the relief afforded to the urgent dyspnœa The longer the tube remains in position, the easier it generally is to swallow When the patient is old enough to understand, he should be instructed to drink rapidly, and to take as much fluid as possible at one time Sometimes he uses rectal alimentation, but very seldom uses the stomach tube He does not think that food is a cause of pneumonia after intubation, as he has never seen any evidence of milk or other nourishment being found in the minute bronchi He had known an adult patient to wear a tube for more than ten months, who not only did not have pneumonia, but meanwhile was cured of bronchitis, which he had when the tube was put in The secretions, he thinks, are the source of the pneumonia met with after intubation, they being aspirated into the finer bronchi It is due primarily to the presence of the tube, because it impairs the patient's power of expulsion As to removing membranes with the forceps, the subglottic division of the tube is of such narrow calibre that it is practically impossible to use this instrument, and he has devised a flexible apparatus for this purpose, somewhat on the principle of the umbrella probang

Dr Dillon Brown read a paper on the *Statistical Records of Intubation* So far as he had been able to ascertain, 760 cases, by 54 different operators, had been reported, he had tabulated 502 cases—211, or 27 07 per cent, had recovered The average age in fatal cases was 3 years and 2 months, in recoveries, 4 years and 1 month In the recoveries intubation was resorted to at an average period of 2 days and 9 hours after symptoms of laryngeal stenosis first appeared, and in fatal cases at an average period of 1 day and 19 hours In the fatal cases the average time between intubation and death was 2 days and 8 hours, in the recoveries the tube was worn on an average for 5 days and 3½ hours O'Dwyer had operated 78 times, Waxham 106, Dillon Brown 84, and Huber 47 times Extension of the membranes to the bronchi was the most frequent cause of death He believed that pneumonia, when present, was secondary in character

Dr W P Northrup read a paper on the *Pathological Anatomy of the Respiratory Tract after Death from Laryngeal Diphtheria and Intubation* Since he read his paper on this subject before the Academy in December, in which he reported 87 cases, 20 additional fatal cases had occurred at the New York Foundling Asylum, to which he is pathologist The cause of this large number during so short a period as four months was the occurrence of diphtheria in connection with a fatal epidemic of measles and scarlet fever In his former paper he stated that he had never met with ulcers of the trachea, but in the 20 cases now reported for the first time there were deep ulcers, laying bare the rings of the trachea, in five cases He had not met with ulceration of any consequence caused by the head of the tube, nothing more than necrosis of the epithelium He had seen no evidence of aspiration pneumonia, as it had been called, due to the entrance of fluids into the finer bronchi

Dr Caillé had performed tracheotomy in 21 cases, with 5 recoveries, and intubation in 16 cases, with 6 recoveries In his cases of intubation diphtheritic membranes were observed on the nares or pharynx in nine cases In most of the cases intubation was done rather late He believed that all the patients would have died without surgical interference, and that one who died would have been saved if intubation had been done earlier The cause of death after intubation was catarrhal pneumonia in a majority of his cases Most of the children who died had taken liquids, and of late he had allowed only solids cut up fine, with ice to allay thirst Since doing this his results were better P B P

BERGEON'S METHOD

Dear Sir —Permit me briefly to call attention to a few points in the preparation of gas for Bergeon's treatment After trying several methods I have, by travelling in a circle, again reached and for the present settled upon, marble chips and H_2SO_4 for generating the CO_2

The objection which Dr Babcock[1] makes regarding the irritating properties of the gas made from mineral acids is, in my practice, entirely avoided A gas which made his "nostrils sting" was clearly unfit for use whether there were enteric ulcerations or not I have discarded HCl and use only H_2SO_4 (C P) because the by-products, (such as free chlorine gas) are much harder to get rid of with the former I use a large mouthed half gallon generating bottle, in which the marble chips (not dust) are placed This is connected with the first wash bottle, (of which there are four, half gallon size,) filled with a strong solution of sodium bicarbonate Any acid fumes which are carried through would combine with the sodium liberating pure CO_2 The next two wash bottles are filled with simple water, unless it is desired to eliminate the H_2S, which is sometimes formed, in which case Ferric sulphate can be dissolved in one of them As H_2S is not objectionable this is unnecessary The last wash bottle is filled with the sulphur water, natural or artificial, which it is decided to use I am using both, and have but little choice, except that the artificial water can be

[1] JOURNAL, May 21, 1887, p 582

made to impregnate the gas much more strongly with H S, and is much cheaper

Everything being in readiness, and the gas bag connected the H SO, is poured into the generating bottle The marble chips should be previously tilted to one side of the bottle and made to remain there as much as possible by gently returning the bottle to the upright position This prevents too rapid evolution of gas, and when the marble in the bottom of the bottle has been utilized fresh marble can be precipitated into the acid by gently shaking it If the evolution of gas is slow it will be sufficiently pure for all practical purposes If it bubbles through rapidly and violently the wash bottles will do but little good, and the gas will be pungent and irritating The number of wash bottles could be increased to half a dozen if it was not thought to be properly washed

I have had no "colicky pains" reported as a result of the gaseous injections, although I send away from my office bags large enough to last patients from two to three days I think the reason is that my gas bags are of heavy rubber, through which osmosis must be difficult, and to any appreciable extent, perhaps impossible

I have nothing to report clinically, except that all the patients upon whom I have used this treatment have shown improvement in some of the symptoms I am not prepared to say that there has been arrest in any case, though one patient has used it faithfully for seven weeks* It is, of course, too soon to express a final verdict, and we can only work on, hoping that it will prove something more than another chimera added to the long list of "consumption specifics" If its power of controlling symptoms should prove to be reliable, and prove to be its only value, Bergeon would still deserve well of his generation Respectfully,

G W McCaskey, M D

Fort Wayne, Ind , May 24, 1887

TAPPING VS INCISION OF THE CYST IN OVARIOTOMY

Dear Sir —In the letter of Dr N Senn, published in The Journal of June 4, there occur on page 641, in reference to an ovariotomy by Mr Langton, the following remarks "The abdomen was opened by an incision through the linea alba about four inches in length, and the cyst tapped with the large trocar of Spencer Wells The puncture was followed by a free escape of fluid along the sides of the trocar, and some of it entered the abdominal cavity, and the wound was freely irrigated with the cyst contents

It has always seemed to me that the use of a large trocar with a truncated cutting edge in tapping a tense cyst is attended invariably by extravasation of fluid, and consequently increases the risk of peritonitis When the cyst contents are fluid, the patient should either be placed upon her side during the tapping, and proper precautions adopted to prevent entrance of fluid into the abdominal cavity, or the cyst should be emptied sufficiently to bring it into the wound by the use of a small trocar or by aspiration In case the contents are colloid they will escape through no tube, and incision of the cyst with the patient on her side, and traction upon the cyst wall, so as to keep it in uninterrupted accurate contact with the abdominal wall, are the only measures which will accomplish the desired object with safety "

I heartily endorse the foregoing suggestions of Prof Senn Having for many years observed the inadequacy of the various forms of trocar in preventing the escape of cystic fluid along the sides of the instrument, I have latterly dispensed with it entirely in some cases, and opened the cyst with a knife instead Dr Carl Braun uses the same method

The cyst having been exposed and the investigation of adhesions finished, a *dry* piece of antiseptic gauze folded into a pad of eight or more thicknesses is placed between the cyst and the incised abdominal wall on the side towards the operator The patient is then rolled strongly over on the corresponding side, and the cyst pressed forward into the wound by the hand of an assistant applied against the flank At a selected spot a small incision or puncture is made with the point of knife, the opening being subsequently enlarged to any extent desired Besides the dry pad, and the intra abdominal pressure of the cyst, an additional guard against the entrance of cystic fluid into the peritoneal cavity may be furnished in the following manner Take a piece of tin plate eight or ten inches long and four inches wide, and bend it lengthwise into the form of a half cylinder The end of this trough, held against the cyst immediately below the point of the intended incision, will serve to convey any fluid which may possibly escape from the cut away from the field of operation This device will be found of great service in whatever manner the cyst may be opened

So soon as the cyst wall becomes sufficiently relaxed, I seize it in folds with strong dull toothed vulsella, and by constant traction keep the opening and collapsing cyst outside the abdominal wound until complete extraction is accomplished

A Reeves Jackson, M D

271 Michigan Ave , Chicago

* This patient died June 5th

BOOK REVIEWS

Diseases of Women A handbook for physicians and Students By Dr F Winckel, Professor of Gynæcology, and Director of the Royal University Clinic in Munich Authorized Translation by J H Williamson, M D , Resident Physician Allegheny General Hospital, Allegheny, Pennsylvania Under the supervision of Theophilus Parvin, M D , Professor of Obstetrics and Diseases of Women and Children in Jefferson Medical College, Philadelphia 8vo , pp xxix—674 Philadelphia P Blakiston, Son & Co 1887

It is a little more than a year since Professor Winckel's work was issued in Leipsig As a teacher of obstetrics and gynæcology he has but few rivals,

and his numerous contributions to the literature of these subjects have made his name familiar to every reading physician And as of late years obstetrics and gynæcology seem to have taken a new hold on the American Physicians, it seems peculiarly fitting that this work should have been translated in this country Still better would it have been had the work been carefully annotated

No one can read this book without being interested and instructed Nor will one fail to be impressed with the idea—which is a fact—that the author is a most conservative gynæcologist, and there is not that neglect of gynæcological medicine for gynæcological surgery which many would possibly wish for The reader will find here no encouragement for useless and reckless laparotomies, Tait, Battey and Hegar operations It is pleasing to note that the author speaks of Sims in the very highest terms, and says "We are indebted to the American, Marion Sims, more than to any one else, for a large part of our knowledge of, and progress in the treatment of diseases of women"

As a whole, the book is excellent It would have been better, however, had more space been devoted to some subjects, as, for example, the varieties of salpingitis, and to tumors of the mammary gland And it would have been well had the proof-reading been done by one familiar with German

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PAPERS TO BE READ AT THE CONGRESS

Dr L DeWecker, Paris, France, "Effusions in the Sheath of the Optic Nerve"

Dr J Hirschberg, Berlin, Germany, "Measuring and Operative Correction of Squint"

Dr Galezowski, Paris, France, "The Operation of Cataract and the After Treatment"

Dr H Power, London, England, "Microbes in the Development of Eye Diseases"

Dr Ole Bull, Christiana, Norway, "Pathological Changes in Retinal Vessels"

Dr L Landolt, Paris, France, "Operation for Strabismus"

Dr A Mooren, Dusseldorf, Germany, 1, "Eye Troubles in their Relation to Occipital Diseases" 2, "The Most Simple Method of Cataract Operations"

Dr W A Brailey, London, England, "Remarks on the Operative Treatment of Glaucoma"

Dr Moura, Rio de Janeiro, Brazil, "Glaucoma in the Negro Races"

Dr A Gayet, Lyons, France, "Ocular Asepsis"

Dr P H Mules, Manchester, England, 1, "Evisceration and the Artificial Vitreous" 2, "A Case of Ciliary Myoma (Intra ocular)"

Dr J Samelsohn, Cologne, Germany, "Detachment of the Retina, its Pathology and Treatment"

Dr F Buller, Montreal, Canada, "Antipyrin in Ophthalmic Practice"

Dr J Richardson Cross Bristol, England, "Retinoscopy"

Dr Geo F Stevens, New York City, "Some Important Problems Respecting Insufficiencies of the Ocular Muscles"

Dr L Conner, Detroit, Mich, "Hot Water in the Treatment of Eye Diseases"

Dr E O Shakespeare, Philadelphia, Pa, "Strength of the Superior Recti Muscles as a Cause of Disthenopia"

Dr F C Hotz, Chicago, Ill, "Restoring the Normal Position of the Free Tarsal Border in Trichiasis"

Dr P D Keyser, Philadelphia, Pa, "Operative Treatment of Posterior Synechia"

Dr S C Ayres, Cincinnati, O, "Gummata of the Ciliary"

Dr A G Heyl, Philadelphia, Pa, "Abnormalities of the Visual Axes"

Dr D S Reynolds, Louisville, Ky, "Necessity for Reform in the Manner of Designating Lenses"

Dr E H Linnell, Norwich, Conn, "Determination and Correction of Astigmatism"

Dr A R Baker, Cleveland, Ohio, "Retinoscopy"

Dr F A Eaton, Portland, Oregon, "Effects of Malarial Poisoning on the Eye"

Dr H C Paddock, New York City, "Ergot of Rye in Ophthalmic Practice"

Dr J L Minor, Memphis, Tenn, "Natural History of Strabismus"

Dr J W Thompson, St Paul, Minn, and Dr G A Staples, Dubuque, Iowa, "Uncomplicated Tobacco Amaurosis"

Dr H Gifford, Omaha, Neb, "Further Contributions to Sympathetic Ophthalmia"

Dr G S Norton, New York City, "The Relative Importance of Small Degrees of Astigmatism Causing Asthenopia and Headache"

Dr E Jackson, Philadelphia, Pa, "The Designation of Prisms by the Minimum Deviation Instead of by the Refracting Angle"

Dr T E Murrell, Little Rock, Ark, "The Best After treatment for Cataract and Iridectomy Cases"

Dr H D Bruns, New Orleans, La, 1, "On the Use of Atropia in Determining Anomalies of Refraction" 2, "Effects of Malarial Poison on the Eye"

Dr E J Gardner, Chicago, Ill, "Small Degrees of Astigmatism, with the Annoyances Belonging to Them"

Dr J F Fulton, St Paul, Minn, "The Advantages of Early Operations in Strabismus"

Dr J F Herbert, Philadelphia, Pa, "Retinoscopy"

Dr A E Prince, Jacksonville, Ill, "Treatment of Dacryocystitis and Fistula by Drainage Canulæ"

Dr J O Tansley, New York City, "Lachrymal Catarrhs with Nasal Complications"

Dr G S Munson, Albany, N Y, "Formation of Bone in the Vitreous"

Dr H L Stickel, Harrisburgh, Pa, "Advantages of Very Hot over Very Cold Water in the Treatment of Acute Inflammations of the Eye"

Dr F B Tiffany, Kansas City, Mo, "Ametropia"

Dr C J Lundy, Detroit, Mich, "Tumors of the Corneo Conjunctival Limbus"

Dr B Pitts, St Joseph, Mo, "Best Method of Operating for Ectropion"

Dr Robert L Randolph, Baltimore, Md, "Sympathetic Ophthalmia"

Several other papers have been promised by distinguished ophthalmic surgeons, but the titles have not yet been sent in

ASSOCIATION ITEMS.

TREASURER'S REPORT —The following itemized report of the Treasurer was not received in time to appear in record of proceedings in the number of THE JOURNAL for June 25, 1887 —ED

DR RICHARD J DUNGLISON TREASURER,
IN ACCOUNT WITH THE AMERICAN MEDICAL ASSOCIATION

1886	DR		
May 1	To cash balance as per report at St Louis meeting	$ 378 39	
" 7	To cash from members and delegates at St Louis meeting less exchange	5 114 20	
1887			
June 1,	To cash from members annual dues to date	8 650 00	
	To cash from office of publication of The Journal advertisements subscriptions, etc, to date	7 580 63	
			$21,723 22
1886	CR		
May 19	By cash to Dr R. J Dunglison Treasurer, travel postage telegrams expressage, etc	$115 00	
" 29	By cash to Dr W B Atkinson Permanent Secretary expenses of travel, etc	102 86	
May 31,	By cash for stamped envelopes, telegrams, expressage collection charges etc	48 75	
June 2,	By cash to Dr LeGrand Atwood Chairman Com of Arr St Louis meeting rental of building and printing	650 00	
" 5,	By cash refunded members by order of the Association	20 00	
" 19	By cash to Wm F Fell & Co, printing circulars postal cards etc	30 60	
July 6	By cash for postage collection charges exchange rental of P O box etc	22 43	
" 27	By cash to Wm F Fell & Co stamped envelopes and postals	17 20	
" 28,	By cash to Dunlap & Clarke printing bill	52 20	
31,	By cash to Wm F Fell & Co stamped envelopes	17 24	
Aug 3	By cash to Altman & Co, stationery printing etc	12 59	
" 5,	By cash for postage stamped envelopes, collection charges	30 80	
Sept 3	By cash to Wm F Fell & Co, printing circulars blanks postals etc	10 25	
Nov 1,	By cash to Dr C H A Kleinschmidt Librarian expressage	15 60	
" 1	By cash to Geo S Davis subscription to Index Medicus	10 00	
" 17,	By cash for postage stamped envelopes collection charges to date	45 86	
1887			
Jan 20	By cash for postage stamped envelopes, stationery exchange collection charges etc	81 85	
Feb 5	By cash to Wm F Fell & Co printing circulars notices etc	9 50	
5	By cash to Dunlap & Clarke printing circulars notices postal cards etc	10 25	
Mar 30	By cash for postage stamped envelopes rental of P O box collection charges exchange to date	52 95	
May 27	By cash to Lea Brothers & Co, expenses of Transactions postage etc, on Transactions	18 85	
" 27	By cash to Dr C H A Kleinschmidt Librarian expressage stationary postage	12 95	
" 27	By cash for postage expressage stationery, collection charges exchange	80 72	
" 30	By cash to Wm F Fell & Co printing circulars stamped envelopes registration books etc	29 50	
" 31	By cash to Dunlap and Clarke printing	13 00	
31	By cash to Dr N S Davis Editor expenses of publication of Journal to date	14 547 55	
31	By cash to Dr N S Davis, Editor, editorial work to date	4 258 95	
	Balance	1 403 77	
			$21,723 22

CHICAGO June 7, 1887

This certifies that I have carefully examined the accounts of R J Dunglison Treasurer of the American Medical Association to this date, and find them accurately added and properly vouched and that there is in his hands a balance of one thousand four hundred and three dollars and seventy seven cents ($1 403 77)

(Signed) ALONZO GARCELON,
Chairman of Auditing Committee

CORRECTION —At the request of Dr B A Watson, of Jersey City, the name of Dr L B Godfrey, of Camden, N J, has been substituted for his own, as the representative of New Jersey on the committee on State Medicine

MISCELLANEOUS.

PRACTICAL RESULTS IN RESTRICTING DIPHTHERIA —Bearing on the communicability of diphtheria and the practicability of its restriction, at a meeting of the state Medical Society of Michigan, May 13, 1887, Dr Baker presented a table and a diagram based on a compilation of reports by local health officers in Michigan for the year 1886 They exhibit the results of isolation and disinfection in outbreaks of diphtheria In the 102 outbreaks where isolation or disinfection, or both, were neglected, the average *cases* per outbreak were a little over 16, and the average *deaths* were 3 23, while in the 116 outbreaks in which isolation and disinfection were both enforced, the average *cases* per outbreak was 2 86,

and the average *deaths* were 66, indicating a saving of over 13 cases and 2 57 deaths per outbreak, or 1,545 cases and 298 deaths during the year, by isolation and disinfection in the 116 outbreaks, compared with those in which nothing was done

TABLE —Diphtheria in Michigan in 1886 Exhibiting the average numbers of cases and deaths per outbreak, 1, in all the 461 outbreaks reported, 2, in the 243 outbreaks in which it is doubtful whether or not disinfection and isolation were secured, 3, in the 102 outbreaks in which isolation or disinfection, or both, were neglected, and 4 in the outbreaks in which isolation and disinfection were both enforced Compiled in the office of the Secretary of the State Board of Health, from reports made by local health officers

	(1) All outbreaks [1] (461 outbreaks)		(2) Isolation or disinfection not mentioned or statements doubtful [2] (243 outbreaks)		(3) Isolation or disinfection or both neglected (102 outbreaks)		(4) Isolation and disinfection both enforced (116 outbreaks)	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Totals	3,085	656	1 103	250	1 650	379	332	77
Averages	6 69	1 42	4 54	1 03	16 18	3 23	2 86	66

[1] These do not include the cases in Detroit and Grand Rapids

[2] It is possible that, in giving the public the benefit of the doubt, cases are sometimes reported diphtheritic which ultimately prove otherwise Many of these being limited to one or two cases, may bring the averages in these columns concerning which least is known below what they really should be All cases and deaths concerning which positive statements were made by health officers are included in the columns marked 3 and 4

THE RUSH MONUMENT —The State Medical Society of California at the recent session in San Francisco, April 20, unanimously adopted resolutions heartily approving the project of erecting a statue of "the immortal Benjamin Rush," in the City of Washington, and requesting the various medical journals to call upon every physician in the State, to contribute the very modest sum of one dollar each to which the subscription has been limited

MEDICO LEGAL SOCIETY OF CHICAGO —At the annual meeting of this Society held June 4, the following officers were elected for the ensuing year President, E J Doering, M D , First Vice President, Boerne Bettman, M D , Second Vice President, Erie Winters, Esq , Treasurer, L L McArthur, M D , and Secretary, Scott Helm, M D

MERITED HONORS TO PROFESSOR ESMARCH — Letters of Nobility have been given by the Emperor of Germany to F Esmarch, Professor of Surgery of the Faculty of Medicine at Kiel

MEDICAL SOCIETY OF THE STATE OF WEST VIRGINIA will hold its twentieth annual meeting at the White Sulphur Springs, W Va , July 13, 14 and 15, 1887 President, S L Jepson, of Wheeling, and Secretary, J L Fullerton, of Charleston

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OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U S ARMY, FROM JUNE 11 1887, TO JUNE 24 1887

Col J H Baxter, chief Medical Purveyor, to proceed to New York City for the purpose of inspecting the medical purveying depot at that place S O 133, A G O , June 10, 1887

Par 15, S O 52, A G O , March 5, 1887, is so amended by Par 9, S O 133, A G O , June 10, 1887, as to direct that Major Chas H Alder, Surgeon, be relieved from duty in Dept of Dak about June 20, 1887, and he is granted leave of absence from the date when so relieved, to include August 27, 1887

Major B E Fryer, Surgeon, found incapacitated for active service by an Army Retiring Board, and granted leave of absence until further orders on account of disability S O 133, A G O June 10, 1887

Capt Jno D Hall, Asst Surgeon, leave of absence extended one month S O 136, A G O , June 14, 1887

Major J H Bartholf, Surgeon, granted leave of absence for two months, to take effect about July 5, 1887 S O 141, A G O , June 20, 1887

Capt Chas Richard, Asst Surgeon, sick leave extended two months, on surgeon's certificate of disability S O 139, A G O , June 17, 1887

Capt Jno J Cochran, Asst Surgeon, granted leave of absence for one month S O 143, A G O , June 22, 1887

First Lieut W C Borden, Asst Surgeon, granted leave of absence for one month S O 135, A G O , June 16, 1887

First Lieut Wm N Suter, Asst Surgeon, designated as medical officer for the rifle camp at Creedmoor, N Y , July 5, 1887 S O 124, Div Atlantic, June 21, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE TWO WEEKS ENDING JUNE 25 1887

Surgeon Thomas C Walton, ordered June 15 for examination preliminary to promotion as Medical Inspector

Surgeon A F Price, detached from special duty at Annapolis, Md , proceed home and wait orders

Surgeon James M Flint, detached from the "Albatross," and ordered to the Smithsonian Institution

P A Surgeon W G Willson, ordered to the receiving ship "Independence," Mare Island, Cal

Medical Inspector C J Cleborne, ordered for examination preliminary to promotion as Medical Director

P A Surgeon G P Lumsden, ordered to receiving ship "Franklin," Norfolk, Va

Medical Director P J Horwitz, permission to leave the United States for six months

Asst Surgeon H N T Harris, commissioned Asst Surgeon in the Navy June 13, 1887

Medical Inspector J C Spear, detached from Naval Laboratory, and granted three months' leave

Medical Director Delavan Bloodgood, detached from Naval Hospital, Norfolk, Va , and to the Naval Laboratory

Medical Inspector Michael Bradley, ordered to Naval Hospital, Norfolk, Va

P A Surgeon H G Beyer, remain on present duty until September 1, 1887

P A Surgeon C G Herndon, remain on present duty until June 17, 1888

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDED JUNE 18, 1887

Asst Surgeon W D Bratton, to proceed to Seattle, W T , on special duty June 8, 1887 When relieved to rejoin station at San Francisco, Cal June 11, 1887

Asst Surgeon R B Watkins, granted leave of absence for thirty days June 8, 1887

Asst Surgeon F C Heath, to proceed to Marine Hospital, Detroit, Mich , for temporary duty June 17, 1887

CORRIGENDA

In THE JOURNAL, June 25, p 719, the first line of quotation top first column should read "A very little little let us do"

In the list of contributors to the Rush Monument Fund, given in the issue of the 25th June, No 26, Vol 8 the name of John E Bready M D , of the Marine Hospital Service, is erroneously given as J E Bradly

Dr Henry O Marcy's name was inadvertently omitted in the signatures to the report of the committee on memorializing Congress relative to medical and sanitary service on board immigrant passenger vessels, as published in THE JOURNAL June 25 Dr Marcy has been a member of the committee from the first, and has heartily cooperated in its work and report

THE

Journal of the American Medical Association

EDITED FOR THE ASSOCIATION BY N S DAVIS

PUBLISHED WEEKLY

Vol IX CHICAGO, JULY 9, 1887 No 2.

ADDRESSES

ADDRESS IN OBSTETRICS AND GYNECOLOGY

Delivered before the Thirty eighth Annual Meeting of the American Medical Association, June, 1887

BY I M JOHNSON, M D,

OF KANSAS CITY MO

The past year has given few, if any, remarkable discoveries, either in gynecology or obstetrics In the domain of gynecology, general attention is being devoted to tubal diseases and their operative treatment The greatest difficulty is, evidently, in correct diagnosis Diagnosis rendered reasonably certain, the removal of the Fallopian tubes is not especially difficult or dangerous

OVARIOTOMY

In ovariotomy it would seem that all has been accomplished that is possible, and it is not improbable that the astonishing success of the operation may lead to the too frequent extirpation of the ovaries for supposed cystic degeneration, enlargement, congestion, etc The practice of leaving the apparently undiscovered portion of the ovary when possible, in the extirpation of ovarian cysts, as recommended by Schroeder, is questionable It is probable that time will prove the safer practice to be the removal of the entire organ Electricity as a therapeutic agent in gynecology is well established

HOT WATER IN SHOCK

Dr Wylie (*Transactions of the Obstetrical Society of New York*, Nov 16, 1886), reports a case of laparotomy for the removal of a diffuse sarcoma of the pelvic organs, during the progress of which, there was considerable blood lost from vessels that could not be secured The patient became collapsed, had a feeble rapid pulse, was cold and bathed in perspiration A large quantity of water at 110° F was introduced into the abominal cavity through a large rubber tube connected with a bag holding about a gollon of warm water The woman rallied promptly, and the hæmorrhage was checked After the operation was finished, an additional quantity of water at 110° F was pumped into the abdominal cavity, and allowed to run out again Dr Wylie called attention to the fact that he used the hot water *not* as a *hæmostatic* but simply with the view of counteracting shock The known physiological action of warm water would suggest it as a potent agent in the treatment of shock Notwithstanding Dr Wylie states that he did not use the warm water as a hæmostatic, he informs us that the hæmorrhage was checked Heat was also communicated to the body, and it is probable that a portion of the water was absorbed entered the circulation, and in that way compensation in a degree for the loss of blood.

COCAINE IN GYNECOLOGY

Dr Cleveland (*Trans Obstet Society of New York*), has operated in two cases of lacerate cervix, local anæsthesia being induced by the application of a 20 per cent solution of cocaine, the patient experiencing little or no pain A tampon saturated with the solution was applied to the cervix, and left for fifteen or twenty minutes I have witnessed two operations for lacerate cervix, in which cocaine was used as a local anæsthetic, with satisfactory results

NITRATE OF SILVER IN RECENT LACERATIONS

Dr L Wilson (American Gynecological Society), advocates the use of nitrate of silver ℥j to ℥j water in early discovered lacerations of the cervix He recommends that the surface be carefully cleansed and dried, then paint the surface well with the solution of silver The application is made every four or five days, until cicatrization is established

Alexander's Operation is still on trial, and will probably not stand the test of time

Hysterectomy is receiving the attention and approbation of many of the able members of the profession at home and abroad, and the danger is that its popularity may lead to the abuse of the operation.

CÆSAREAN SECTION

In the domain of obstetrics, when dystocia is the result of abnormal conditions of the parturient canal, whether in the bony or soft tissues, to the extent that labor cannot be terminated by the conservative operations of the forceps or version, the profession is looking with a degree of favor toward the Sanger Leopold, or improved Cæsarean operation.

NEW PATHOLOGY OF LABOR

In the March and April numbers of the *American Journal of Obstetrics* may be found the most interesting, and probably the most important contribution of the year, by A F A King, of Washington City, entitled "A New Explanation of the Renal Troubles, Eclampsia, and other Pathological Phenomena of Pregnancy and Labor" The purpose of the paper is to present a new and more satisfactory explanation of the etiological relation between pregnancy and the nephritic derangements that so often attend it.

The paper does not deal with renal difficulties alone, but with other pathological states as well

Dr King's theory, briefly stated, is that the disturbances in the renal circulation and functions are produced chiefly by pressure of the gravid uterus upon the abdominal aorta or its branches, or upon the vena cava or its branches, or upon both or all of these, in consequence of the child and womb not maintaining during pregnancy, their normal lateral obliquity above the pelvic brim This, he says, is the pith of the whole matter He claims that the normal position of the child in the uterus during pregnancy, before labor begins is dorso anterior, of an oblique presentation, commonly known as a transverse presentation Therefore a head presenting toward the centre of the pelvic canal and os uteri, with the long axis of the child parallel with the axis of the superior strait is abnormal The normal position of the gravid uterus as defined by Dr King during the latter months of pregnancy, before labor begins, is the lateral oblique position corresponding more or less with the oblique position of the child The fundus being directed toward the right or the left side of the lumbar vertebra, and the lower segment of the uterus, with the contained head of the child should rest during pregnancy upon one of the iliac fossa, and that this is the normal condition both in the primipara and multipara

In other words, that there is no physiological reason, why in multipara the head of the child should rest during pregnagcy upon one of the iliac fossa and in the primipara, the lower segment of the uterus and contained head should descend into the pelvic cavity three or four months before full term, and if this obliquity of the womb and child be maintained during pregnancy there can be no injurious compression on any of the blood vessels, lymphatics or the uterus But with the womb and fœtus with their long axis in line with the axis of the plane of the pelvic brim, the vessels both arterial and venous would of necessity be pressed upon, and their function seriously interfered with Dr King hopes to show that eclampsia during pregnancy and labor, and their alleged preceding pathological states may be traced back to mal position, to the presentation of one end of the fœtal ovoid instead of an oblique presentation Dr King maintains, also, that premature distention of the cervical canal and lower uterine segment, and the premature descent of the lower end of the fœtal ovoid below the pelvic brim are sufficient to account for uterine irritation

So, whether the convulsions be due to uræmic intoxication, to uterine irritation, to cerebral hyperæmia or reflex local irritation in other viscera, or several of these coincidently, they may all be accounted for by pressure of the gravid uterus and child when the normal obliquity is wanting The causes of the disturbance of the normal lateral obliquity of the womb and child, and consequent premature descent below the pelvic brim, especially in primiparæ, are, according to Dr King, dress, corsets, etc

The question suggested by Dr King's paper, to be answered in the future, is Does eclampsia during pregnancy and labor, and their alleged preceding pathological states, occur in cases of transverse presentation when the uterus and child are wholly above the pelvic brim during the last months of pregnancy up to the time that labor begins? In discussing this part of the subject he refers to the fact, that obstetrical writers and teachers, when discussing the obstetrical treatment of eclampsia, confine their remarks almost exclusively to head presentations In regard to the obstetrical indications in transverse presentations they are silent In short, in a table of 300,018 labor cases collected by Dr King, with 212 cases of eclampsia, there is only one distinctly isolated coincidence occurring of eclampsia and transverse presentation during labor

I will not occupy your time, gentlemen, with a further review of the literature of the progress of obstetrics for the past year with which all are familiar I wish, however, to call attention to a few unsettled practical questions pertaining to the

MANAGEMENT OF THE NORMAL THIRD STAGE, AND THE PUERPERAL STATE

In the management of the normal third stage of labor and puerperal state should ergot be given? The profession is not agreed with reference to this question, some advocate the use of ergot before the close of the third stage, others immediately upon the expulsion of the placenta, and still a third class is not in favor of the entire administration of the drug

These differences are probably the outgrowth of opinions entertained by the profession in regard to the physiology of the third stage of labor and puerperal state, or the action of ergot All are familiar with the fact, that immediately following the expulsion of the child, there is a period of lassitude and repose This repose is necessary for the restoration of uterine contraction which is wanted for the expulsion of the placenta, and retraction to secure against hæmorrhage and septicæmia This end can only be physiologically attained, as all clinicians well know, by a process of rhythmical contractions of the uterus The blood circulating in the uterus for the nutrition of the child is now superfluous and has to be disposed of To this end the uterine muscles retract and the blood contained in the sinuses is forced out into the cavity of the uterus This being the physiological action of the uterus, why use ergot in the normal third stage, or puerperal state?

Are there not several objections to the routine use of the drug? Ergotism once established, is beyond control, it will run its course Ergotic contraction of the uterus is tetanic in character, and does not observe the physiological character of rhythmical contraction and relaxation, and further, the tetanic contraction of the non-striated muscular fibres of the uterus may be followed by loss of contractile power, a condition that tends to secondary hæmorrhage, and certainly retards the processes of involution

The *management of the placenta* has given rise to considerable discussion for the last few years The older members of the profession are inclined to deliver the placenta by early and gentle traction upon

the cord, and knead the uterus well in the meantime to secure good retraction The delivery of the placenta should not be deferred longer than ten or fifteen minutes After pains, physiologically considered, are salutary rather than otherwise, and if good uterine contraction has been secured seldom require treatment

The parturient woman should be kept perfectly quiet for a few days, and the second or third day she should be encouraged to sit upon the vessel when passing urine so that clots, if there be any in the vagina, may pass away The patient should be well nourished during the puerperal period

There is diversity of opinion as to the utility of *vaginal and intra uterine injections* during the puerperal period The application of antiseptic principles in obstetrics is no longer an open question The decided reduction of mortality in hospital and private practice following their use is an unanswerable argument in their favor, and the profession would probably differ less about the antiseptic treatment if a broader view of the subject was taken, and did not confound the principle of the treatment with the doctor's method of carrying it out The principle of the treatment teaches that everything is more or less *dangerous* that is *not necessary* The danger of prophylactic intra uterine injections has been demonstrated by Hoffmeier, who, in a series of over 200 cases, administered an intra uterine injection as soon as labor was completed, and in about the same number of cases omitted the injection The mortality was 50 per cent. greater in the cases that were treated by the intra uterine injections

The essence of the principal is to protect the woman by scrupulous cleanliness, and *every* other possible means from septic organisms or products, and their poisonous action Herein lies the success of modes of treatment which at first view appear to be in contra distinction to the antiseptic principle

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LECTURE ON SUBCUTANEOUS BLOOD-INJECTIONS, SALT WATER INFUSION, AND INTRA-VENOUS TRANSFUSION[1]

BY PROF DR H von ZIEMSSEN,

DIRECTOR OF THE MEDICAL CLINIC IN MUNICH

The diseased conditions in which a renewal or repair of the blood seems necessary are so numerous, that the pertinacity with which the question of transfusion is again and again brought before the physician, despite repeated reverses, is easily explained It is well known that the enthusiasm over the transfusion of the blood of animals (such as sheep), into the human circulation, was brought to an end by the dangers of the operation, and by the publication of the works of Landois, Ponfick, and Panum, which showed that the blood of one species cannot be safely transfused into another species

At this time (1870–1873) I was experimenting with subcutaneous blood injections, and made a series of subcutaneous injections of animals' blood (lamb, calf, cow) in cases of various diseases in men The results were anything but satisfactory, as on the one hand there were no noteworthy favorable results, and on the other hand there was the same series of bad symptoms seen in intra-venous transfusion to day fever, hæmoglobinuria, irritation of the skin, urticaria, and suppuration at the points of injection In a very anæmic case of Bright's disease the injection of 50 grammes of lamb's blood caused a severe phlegmon But Panum, Ponfick and Landois have cleared up the whole question, they have laid down the most certain rules for the judging of all questions which come up in this matter, and we may predicate the following as certain Defibrinated blood of the same species, rich in oxygen, brought into the circulation under the necessary precautions, can not only guard against death from hæmorrhage, but also serve as an important means for reparation of function The blood of another species may also prevent death from hæmorrhage, but does not assist functional repair, because the foreign blood-cells break down and are excreted The hæmoglobin of the blood cells is partly taken up by the internal organs, especially by the spleen, and disappears here, but the greater part is excreted by the kidneys, and hæmoglobinuria results The kidneys show hæmoglobin infarcts, and in consequence of coagulation of fibrin thromboses and hæmorrhagic infarcts are also found in the lungs etc As the cause of these coagulations in the circulating blood, Alexander Schmidt and his school have found a fibrin ferment, which is due to the breaking down of the white blood cells The dissolution of the leucocytes begins at the moment when they escape from the vessels, and the ferment arising from them begins its work immediately upon the fibrinogenous substance, and produces the fibrin clot in the escaped blood With the coagulation of the fibrin the ferment exhausts itself for the most part, so that whipped blood, defibrinated, contains only a small amount of fibrin ferment, which is innocuous to the circulating blood It acts much more injuriously on fresh warm expressed serum, still containing blood discs, which A Kohler designates as "ferment-blood" The injection of this ferment blood causes the severe symptoms of ferment intoxication The capillary thromboses and hæmorrhages are largest in the lungs, under the pleura and the pericardium, in the mucous membrane of the small and large intestine, and in the mesenteric and bronchial glands That this ferment intoxication in man, after the transfusion of human blood, is only seen to a limited extent—the initiatory chill of fever, and the dyspnœa and oppression belong here—is due to the fact, as already remarked, that the greater part of the ferment is consumed by the coagulation of the fibrin, which is accelerated by whipping the blood Nevertheless, there are cases in which severe symptoms of intoxication occur, and in which there is nothing wrong with the mode of preparation of the blood In the fatal cases the condition of the heart muscle

[1] Translated by permission of author and publishers, from advance sheets, by Wm G Eggleton M D of Chicago

and of cardiac innervation plays an important part outside of the intoxication, the sudden increase of blood pressure paralyzing the heart, without the occurrence of previous dyspnœa

There is another important point, which has been especially shown by Ponfick and other authors in the transfusion of *heterogeneous* blood all the new blood cells die The hæmoglobin, which is set free by the disintegration of the cells is not excreted by the kidneys merely as indifferent material, but acts on the blood cells of the patient in such a manner as to cause their disintegration, so that by the transfusion of blood of the lower animals into man no active oxygen carriers are added

How is it now regarding the transfusion of homogeneous blood, especially in man? That a slight degree of hæmoglobinuria may occur from homogeneous transfusion cannot be denied, the mechanical insults to which the corpuscles are subjected during defibrination, the overheating of the blood (above 42 C) which easily takes place even in the water bath unless the greatest care be exercised, the presence in the collecting vessels of some of the water which has been used for cleansing them, etc , are all factors which may cause disintegration of numerous blood cells and the setting free of hæmoglobin in the circulating blood Theoretically these things and their consequences are indisputable, but in reality it is different Small quantities of hæmoglobin and large quantities of fibrin ferment can be rendered harmless and eliminated by the blood, probably by the oxygen of the red discs, and we may disregard these apparent dangers But the most certain proof to me that the introduction of defibrinated human blood into the human circulatory system of itself caused no symptoms of hæmoglobinuria and ferment intoxication, is to be found in the complete freedom from reaction after subcutaneous blood injections, if these be made correctly An injection of 200 to 350 ccm of defibrinated blood, a quanty which is completely absorbed, causes neither fever of any consideration nor dyspnœa nor hæmoglobinuria, in short, there are no troubles except the local pain of the injection That in such large quantities many red corpuscles must be destroyed by defibrination, the syringe, the energetic massage, etc , is just as probable as that in spite of defibrination some fibrin ferment must remain It seems that besides the remaining fibrin ferment and the freed hæmoglobin, there must be other factors of danger in intra venous transfusion, as such I consider the mixture of air with the whipped blood, which can never be entirely avoided, the formation of fibrin clots during the injection, and the sudden increase of pressure in the right heart These three factors cause the most alarming symptoms after intra-venous transfusion, and in such a manner that we cannot say in all cases that ferment intoxication is the cause, and the appearance of these symptoms immediately after transfusion is sufficient proof that these three factors are present, and cause the symptoms

One thing, then, is certain, intra venous transfusion may endanger life, and not infrequently does, though we are not clear as to the conditions in individual cases Every one who has often done transfusion or assisted in the operation knows that besides the known causes of danger faults in the technique may easily slip in (such as overheating the blood, mixture with air) if the operation be hurriedly done On account of the hidden dangers and the numerous unfavorable results, this operation has already become to me a very uncomfortable one, and now, since I have found a complete substitute in the method of subcutaneous injections, I would under no circumstances subject a patient to the great dangers of intra venous transfusion Nor can peripheral arterial transfusion, as proposed by Huter, or centripetal arterial transfusion, proposed by von Lesser, be considered as more safe, nor do they recommend themselves to the profession generally

The case is very different when the subcutaneous cellular tissue is selected to receive the blood Here every danger is excluded, as the connective tissue retains the blood clots and particles of air as a fine serve, and by a proper method of injection no blood residuum is produced, or certainly does not lead to phlegmonous inflammation Nor in this case is there any sudden pressure on the right heart, there is no reaction, as from hæmoglobinæmia and ferment intoxication, and as much defibrinated blood or salt water as desired can be inserted in a few minutes, without there being anything of a serious nature in it And this is no small consideration when it is remembered that most transfusions are made after severe hæmorrhage, when the veins are very much narrowed, difficult to find, and it is with difficulty that the cannula can be introduced This loss of time and the dangers are avoided by the subcutaneous method

Bareggi, of Milan, who began to make experiments with subcutaneous blood injections about the same time that I began to study the subject, showed that twelve hours after such an injection (with or without massage?) red corpuscles appeared in the thoracic duct, and that they could be found in the lymph of the thoracic duct three days after the injection was made Bareggi also showed that the red corpuscles could pass in a sound condition through the absorbents of the connective tissue into the lymphatics and through the thoracic duct into the circulation (within twenty minutes after an injection he was able to recognize red blood corpuscles in the large lymphatic trunks of the region in which the injection was made) He also made some experiments on patients, and partly with good results, though his method is not free from faults, as he states that injections of a few up to 50 grams of blood in men were constantly followed by a slight fever His opinion is that blood injections are probably superior to venous and peritoneal transfusion in cases of anæmia running a chronic course, since small injections can be given daily, but that the method cannot displace intra-venous transfusion in cases of acute anæmia

I must decidedly differ with Bareggi as to these conclusions When my method is exactly followed

no fever arises when large quantities of blood are injected at one sitting (100 to 200 ccm), and at most there is only a slight rise of temperature when still larger quantities (250 or 350 ccm) are injected at one sitting Since my first publication on this subject (1885) I have collected a series of new observations which completely bear me out in my assertions I will now describe to you my method of subcutaneous blood injections

After disinfection of the skin at the bend of the elbow the median vein of the donor is opened with a carefully disinfected lancet, and the blood received in a disinfected vessel, carefully dried by means of disinfected mull, being whipped as it flows with a disinfected stick, and finally, after 200 or 300 grams of blood are obtained it is placed in a carefully disinfected beaker glass, on a water bath at a temperature of from 37° to 40° C , and further whipped The water bath should be carefully watched in order that the temperature may not be allowed to rise above 40° C

Meanwhile the patient is prepared for the injections The skin over the anterior, outer and inner portion of the thigh which is the best part of the body for these injections, and when larger quantities are to be injected the legs and arms also, is first washed with a 5 per cent solution of carbolic acid, and then with alcohol, while the patient is chloroformed [1] Chloroform narcosis is absolutely necessary when large quantities are injected, because it alone renders the very painful massage possible My syringes hold exactly 25 grams They are made of glass, with metal protections, and are manufactured very carefully by Katsch, of Munich They are carefully disinfected with carbolized water before the operation, and then washed out with warm distilled water It is not necessary to dry them out after this The cannula is strong and long, and its lumen corresponds very nearly to the second size cannula of Dieulafoy's hollow needle for thoracopuncture With a very narrow cannula the unavoidable fibrin clots cause frequent obstruction, while they are easily forced through a larger one, and without injury to the subcutaneous cellular tissue The cannula is carried through a raised fold of the skin deep into the subcutaneous cellular tissue, and then the syringe is slowly and completely emptied, while an assistant rubs over the point of injection with all his strength This is an important point, it is to prevent an abscess, but the massage must dissipate the blood at the very time that it leaves the cannula The assistant must use borated vaseline freely, and use both hands and all his strength After the cannula is withdrawn massage should be made for a few moments with the flat hand up and down, instead of with full force The duties of the massage assistants are most arduous, the assistants should therefore be changed, as much depends upon their efforts The syringe is now filled again, and an injection made in a new place in the same manner

[1] It is not stated how long the blood must remain on the water bath before being used The supposition is that when the patient is ready the operator should begin immediately but should not remove the blood from the water bath —[*Trans*]

According to the quantity to be injected 6, 8, 10 or more injections must be made, there is no particular limit as to numbers In using 350 grams I once made fourteen injections It makes but little difference whether 100 or 300 grams be injected into the thigh I have generally ceased the injections only when there was no more blood in the beaker glass

Under the powerful massage the subcutaneous cellular tissue must necessarily suffer a good deal of stretching and tearing, which causes pain After the operation, therefore, I have an ice bladder placed over the thigh, and this is renewed as long as the pains continue Ecchymoses are frequent but not invariable results of the injections They most frequently occur in the tender skin on the inner side of the thigh, especially in women The dense adipose tissue of the female is not especially favorable for subcutaneous injections The meshes of the subcutaneous cellular tissue are everywhere filled with fat cells, and on this account there is great resistance to the dissipation and absorption of the injected blood In order to study these difficulties closely, I have made a large number of injections in female cases, and it is apparent that the female sex offers the greater number of cases requiring the operation But in spite of the density of the adipose tissue in the female the injected blood may be completely dissipated After injections in persons practically under sentence of death, I have examined the condition of the adipose tissue on the cadaver a few days after the injections were made Nothing abnormal was found besides slight hæmorrhagic imbibition of the fatty cellular tissue, and nothing of imbibition was found when death took place a few weeks or months after the injections were made

It is very important that the needle be carried as deeply as possible after the adipose tissue has been taken up in a thick fold, and the injection should be made slowly so that the blood may be completely dissipated by the massage When the precautions mentioned are carried out inflammation and suppuration will not occur When small quantities are injected (from 50 to 100 grams) the pain after the injections is very slight, and the patient can use the leg again in two or three days But with larger quantities the pain is considerable and more lasting, and the patient has to keep his bed for five or six days Of the large number of injections which I have made in the last few years, I have seen inflammation and suppuration in only two cases, and in both they were due to avoidable faults in the technique Hæmoglobinuria never occurs, and very seldom respiratory and digestive troubles

The favorable results of blood injections are transitory and permanent First of all the increase in the amount of hæmoglobin in the blood must be determined The increase does not always correspond to the quantity of blood injected, and is so much the more noticeable as the hæmoglobin was low before the injection The amount of hæmoglobin is determined spectroscopically, which is thus far the most certain and exact method The hæmochromometers of Bizzozero and von Fleischl, which I

have often used for comparison, will come into more general use, as there is a pressing need of an uncomplicated and inexpensive apparatus for the determination of hæmoglobin Not until hæmoglobin can be determined without minute details and loss of time will the value of this physiological factor become apparent for the diagnosis, prognosis and treatment of many diseases The splendid work of Leichtenstern shows us what a mine of interesting and important facts bearing on this subject there is to be worked [2]

All the hæmoglobin determinations in our clinical institute have been made by Vierordt's method, as recommended by Leichtenstern [3] The spectroscope and all apparatus was made by Steinheil The collection and mixing of the blood is done at the bed side, or directly by the apparatus if the patient can leave the bed The dilution is generally 1 200, and 1 100 only in high degrees of oligochromæmia The light power in each case was determined from the mean of 10 observations, and from this the extinction coefficient was calculated The observations should always be made between 10 and 12 in the forenoon, and 6 and 8 in the afternoon, so that they may not be affected by the daily variation or by the ingestion of food The daily variation in the hæmoglobin, which Leichtenstern found in healthy persons, takes place principally at noon and midnight, being higher between 12 and 2, and lower between 4 and 6 than the average By making the observations at the times indicated the influence of these variations is avoided We may leave out of consideration the somewhat higher proportion of hæmoglobin in the male sex, since as a rule all that we want is the relative amount of hæmoglobin

One or more estimates of hæmoglobin should be made before the injection is made After the injection the first estimate should be made within twenty-four hours, in order to see the primary effect of the operation, and then again in one or two days to determine the decrease after the increase In many cases also the blood corpuscles should be counted (Zeiss's apparatus)[4], as this may be of more value in judging of the blood gain than the estimation of the hæmoglobin Of course the amount of color is not always parallel with the number of corpuscles, indeed, it may reach a comparatively high mark, while there is a relatively slight decrease in the number of corpuscles On the other hand, a comparatively slight oligochromæmia may exist at the same time with a relatively considerable oligocythæmia To illustrate this I will give a few examples of the different proportions of hæmoglobin to corpuscles in different affections From the authors named above I take as the normal for the corpuscles, 5,000,000 per cubic centimetre, for the hæmoglobin, 1 4400= extinction coefficient [5]

1 C K, male, æt 22 Plethora universalis, polycythæmia Hypochondriac Food very richly albuminous, frequent epistaxis, palpitations of heart, congestions, some enlargement of spleen, has taken much iron in last few months Corpuscles 6,200,000 in ccm, hæmoglobin 111 24 per cent After two months of dieting (reduction of albuminoids, riding, mountain climbing) corpuscles 5,600,000 in ccm, hæmoglobin 102 17 per cent

2 D L, male, æt 18 Pseudo-leukæmia (splenic tumor 24×10), oligocythæmia proportionately higher than the oligochromæmia Corpuscles 3,325,000 in ccm, proportion of white to red, 1 316, hæmoglobin, 67 79 per cent

3 C W, female, æt 24 Malarial cachexia, high degree of oligochromæmia, comparatively slight oligocythæmia Corpuscles 4,600,000 in ccm, proportion of white to red, 1 229, hæmoglobin, 24 15 per cent

4 A B female, æt 15 Chlorosis, oligochromæmia marked, oligocythæmia of less degree Corpuscles, 3,500,000, hæmoglobin, 32 40 per cent

5 W B, female, æt 24 Ulcer of stomach, anæmia, oligochromæmia and oligocythæmia tolerably equally and well marked Coloring matter and corpuscles each less than one half normal Corpuscles 2,217,500, white to red, 1 265, hæmoglobin, 34 86 per cent

These examples serve to show the variability of the two factors, and of their proportions to each other This is not the place to say more of this special part of the subject, but those who are interested can consult the works of Gessler and Graeber

The increase of hæmoglobin is greatest within the first twenty-four hours after the injection, and it then gradually falls during the next few days As a rule there remains an excess above the quantity present before the injection, though there are cases of severe anæmia, from different causes, in which the *status quo ante injectionem* is reached again in a few days After a longer or shorter interval repeated injections may gradually increase the amount of the iron in the hæmoglobin, though the primary increase and secondary decrease of the hæmoglobin is repeated after each injection The larger the injection of course the greater is the up and down variation The following will illustrate very clearly what has been said

R C, female, æt 23 Severe chlorosis, with gastric troubles Iron and generous diet from Nov 26 until Jan 8 almost with out the slightest good result

Nov 26,	6 P M,	hæmoglobin	23 26 per cent
Dec 7,	"	"	24 33 "
" 8,	10 A M	"	24 60 "
" 8,	10 30 A M,	injection of 200 ccm defibrinated human blood	

[2] Leichtenstern Untersuchungen uber den Hæmoglobingehalt des Blutes in gesunden und kranken Zuständen Leipsig F C W Vogel

[3] Vierordt's method, while possibly more accurate than the estimation of hæmoglobin by von Fleischl's or Gower's hæmometer entails a large amount of trouble, and unless one can use a spectroscope, and has one at his disposal, it is impracticable The hæmometers of von Fleischl and Gowers are simple, determining the amount of hæmoglobin in the one case by a ruby colored wedge of glass, and in the second case by comparison with some standard solution, as picrocarminate of ammonia —[*Trans*]

[4] This is an apparatus composed of the pipette used with Malassez' "compte globules," known as the mixer of Potain, and a cell similar to that of Gower's The squares in Zeiss's hæmacytometer are only 1 20 millimetre, which renders the counting easy It may be used with any microscope without adjustment for the different objectives —[*Trans*]

[5] 1 4400 represents normal amount of hæmoglobin, or 100 per cent The extinction coefficient is calculated from the amount of light shut off in passing through the hæmoglobin solution In his lecture Professor Ziemssen only gives the extinction coefficient in each case, but not the percentage of hæmoglobin which it represents—which is unintelligible to one who does not understand the method In this translation the per centage has been calculated, though as a rule only two decimals are given —[*Trans*]

Dec 9, 10 30 A M, hæmoglobin 42 21 per cent
" 10, 10 00 A M, " 35 91 "
" 13, 5 30 P M, " 28 83 "
" 15, 5 00 P M, " 30 001 "
" 16, 10 00 A M, " 20 42 "
" 16, 10 30 A M, injection of 100 ccm human blood
" 17, 6 00 P M, hæmoglobin 38 52 per cent
" 18, 7 00 P M, " 32 34 "
Jan 7, 7 00 A M, " 32 85 "
" 7, 11 30 A M, injection of 275 ccm human blood
" 9, 5 00 P M, hæmoglobin 64 54 per cent
" 19, 10 00 A M, " 44 002 "

It is interesting in this case to see how little the iron and generous diet did to increase the amount of the hæmoglobin The separate injections of 200, 100, and 275 ccm, on Dec 7 and 16, and Jan 7, caused not only a considerable primary increase of the amount of the hæmoglobin, corresponding to the amount of blood injected, but also a secondary and gradually increasing quantity of iron in the hæmoglobin The increased amount of blood given to the system was also considerable At the last operation 275 ccm, or $\frac{1}{21}$ of the body weight, was injected, and within twenty four days 575 ccm, or $\frac{1}{10\frac{1}{4}}$ of the body-weight Very striking was the improved color of the skin and mucous membranes after each injection, being in direct proportion to the amount of blood injected, and to the degree of existing oligochromæmia By this bettered condition of the color the general appearance of the face was markedly changed from day to day This was especially apparent after the last injection, which was followed by not the slightest general disturbance, by no fever, and by no abnormality of the urine This improved condition of color was also marked in a case which I saw with Dr Benczur, the case being that of an extremely anæmic little girl of 8 years In this case 50 ccm of blood were injected into the thigh On the next day the hæmoglobin had risen from 16 11 to 30 64 per cent There was no fever or other trouble In this case the injection amounted to $\frac{1}{38\frac{1}{2}}$ of the body-weight, or $\frac{1}{3\frac{1}{2}}$ of the whole mass of blood, as Bischoff states that the blood mass is $\frac{1}{11}$ the weight of the body But in the other case it will be seen that the injections amounted to $\frac{1}{10}$ the presumptive blood-mass

With the improved color of the skin and mucous membranes is an increased freshness of appearance, increased muscular energy, and better appetite and sleep Of course these secondary results are not always equally developed First of all, the secondary effects always depend on the nature of the trouble, and on the amount of blood injected, and the duration of the improvement of the general functions varies very much with these In many cases only one injection is necessary, in others more

What we can attain therapeutically in this way, of what value subcutaneous blood injections are in individual diseases, which require renewal or increase of blood, we cannot tell at the present time But it is sufficiently demonstrated to me that subcutaneous blood injections can be used without difficulty or danger to the patient, that a considerable quantity of blood may be used without endangering the safety of the patient, that the favorable results thus far shown are probably permanent, and that there is not only an increase in the fluid quantity of the blood, but an actual transplantation of blood cells By further experiments we must distinguish between the primary, and the secondary or permanent, effects, we will then have to differentiate in regard to the primary effects, which of them are to be attributed only to the increased quantity of fluid blood, and which to the supply of functionating oxygen carriers

(To be concluded)

ORIGINAL ARTICLES

THE AFTER-TREATMENT OF CATARACT CASES, TO THE EXCLUSION OF COMPRESSES, BANDAGES, DARK ROOMS AND RESTRAINT

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty Eighth Annual Meeting of the American Medical Association

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At the last meeting of the American Medical Association, May, 1886, in St Louis, I reported to the Section on Ophthalmology that Dr Charles Michel, of St Louis, was treating cataract cases in light rooms with adhesive straps, instead of by compresses and bandages in dark rooms, and that he found it a desirable method of treatment Although the discussion which followed showed clearly that the members of the Section did not endorse the method, or think well of it, yet I was so impressed by it, that I told the Section that I would at once test this plan of treatment and would report at the ensuing meeting in Chicago the results of my experiments Having control of all the material at the Presbyterian Hospital of Baltimore City, to which last year were drawn, among its 6,125 cases, 342 cases of lens troubles, I had ample opportunity, immediately upon my return from St Louis, to put the suggested method into practice

During the month of May, 1886, sixteen cataract extractions, beside iridectomies, were dressed with a strip of isinglass plaster as the sole dressing, and were kept in moderately lighted rooms These plasters were put on each eye, and were removed on the fifth day After removal the eyes, by contrast with those treated by bandages and in the dark, were found less red, with less lachrymation, and less photophobia Moreover, convalescence seemed to be expedited to the extent that cataract patients, at the end of two weeks, could enjoy the freedom of the entire house without smoked glasses and without inconvenience

Upon further experimentation, I found that much of the restraint practised by Dr Michel and by other ophthalmic surgeons, such as keeping the patients on their backs in bed for a number of days, with both eyes closed, was unnecessary As I eliminated them one after another I found that they had not added to the per cent of successes, and certainly not to the comfort of the patient I now feel that I have settled down upon a method of treating cataract cases after

operation which is far in advance of the accepted after-treatment in general use My cataract extractions since May 12, 1886, number ninety eight, and my iridectomies sixty seven, an experience amply large to test the efficacy of any one particular method I now can say, without reserve, that I have abandoned absolutely compresses, bandages, dark rooms and restraints from the after-treatment of cataract cases, and that my per cent of good results exceeds my former experience under the old methods of compresses, bandages and dark rooms still too general in use, to the annoyance of both surgeon and patient

My method of procedure is as follows Patients are operated upon, as a rule, upon the day they present themselves for treatment, if they feel well and do not complain of fatigue from travel They undergo no preparation whatever My experience is that healthy patients, requiring operations on their eyes for the restoration of sight, do best when their systems are not disturbed by medication, and are also better off when not kept in suspense by deferred operations In cataract operations particularly, they cannot disassociate from this sensitive organ, the eye, a painful operative procedure It is a great relief to all of them to have the trying ordeal over, and with it the cause for a very disturbing nervous excitement is removed I have no superstitions concerning the necessity for daily evacuations of the bowels, which haunt the minds and guide the practice of so many physicians Should complaint of constipation, and fulness of the head as a consequence, be made prior to the operation or during the course of treatment, a purgative is given, but it is the exception, not the rule

All cases are operated upon in the operating room of the hospital, on a table of suitable height and width, which stands in a projection containing three very large windows, so that I have ample light to operate on cloudy as well as on bright days Considering the operation itself as by far the most important part of the entire treatment for the restoration of good vision, in eye cases, and that, when the operation is well done, nine tenths of the battle is gained, I try to secure every convenience for both patient and surgeon during this very important crisis After full trial I have abandoned operating upon patients in their beds Too much inconvenience is occasioned from the awkward positions and body contortions of the surgeon during these bed manipulations Unless the surgeon is perfectly at his ease, and has perfect control of the head of the patient, he cannot do the important manual work with satisfaction

I have never seen any trouble come from the movements of the body after the eye was properly dressed I do contrast most favorably the quiet walking of a patient from the table to his room after a cocaine extraction as against the violent retching from the general anæsthetic of a few years since, in bed operations, and yet we know that these violent convulsive acts were not incompatible with the most perfect results in restored vision to cataract patients

The table I use is narrow, facilitating manipulation from the head or from either side, and is just so high as to permit me to stand while operating, without uncomfortably bending I have sixteen private rooms connected with the Presbyterian Eye and Ear Charity Hospital, and I succeed in inducing most of my private patients needing operations to use them, therefore I am never called upon to operate in hotels or private boarding houses, and if I can help it, not in private dwellings, so that, in by far the majority of my cataract cases, I can enjoy the comfort of my hospital operating room and the operating table

In cataract cases I use invariably a 4 per cent solution of the muriate of cocaine for local anæsthesia I have used it now in nearly 300 cataract extractions, and have reason to extol its peculiar advantages for eye surgery I have never seen harm come from its use, and have every confidence in its efficacy and safety It is instilled into the eye when the patient reaches the operating room, and most frequently when he is on the operating table Usually, in five minutes the eye is fully anæsthetized, and is then ready for operation After the speculum is inserted the eye is suffused with a biniodide of mercury solution, 1 part to 20,000 By elevating the speculum the antiseptic solution is brought into contact with every part of the mucous lining of the lids and eyeball, and is much more thoroughly applied than when the everted lids are mopped as I have seen done by others If there be any virtue in the use of the germicide, it is all-important that no septic germs be left hid away in folds of membrane The wiping of lids and cornea cannot make a complete application for thorough cleansing Before using any of the instruments they are put under the hot water spout They are also washed with very hot water as soon as they are used In this way cleanliness is ensured

I make a wound in the clear cornea near the scleral border, large enough to allow of the free exit of the lens I make a small iridectomy, taking care, however, that no portion of the iris remains caught in the angle of the wound When the iris is drawn out by the forceps, one clip of the scissors removes all that is needful for the iridectomy Blood in the anterior chamber from the section of the iris I see much less frequently than in former years, and this I attribute to the constringing effects of cocaine on the iritic vessels, as evinced before the corneal section by the dilatation of the pupil I have made five extractions recently without iridectomy, but have not succeeded in getting a perfect pupil in any of them, all the cases had some iritic inflammation, enough to make the pupil dilate irregularly under atropia In two cases there were small iritic herniæ, although eserine had been freely used Notwithstanding the fact that I lost none of these eyes, I have resumed iridectomy as the less hazardous method

The capsule is opened freely, usually by horizontal incision over the upper margin of the lens, although sometimes I make the capsulotomy boldly over the pupillary face of the lens The lens, with all detritus, is removed by pressure of the rubber spoon upon the face of the cornea, making pressure with the edge of a second spoon upon the scleral border of the wound to dislodge particles of lens substance which may be caught under this ledge Should any cloud-

ing exist in the capsule, rendering it visible after the lens has escaped, I introduce the iris forceps and extract the capsule entire This always leaves a perfectly black pupil, and ensures a perfect result When the operation is finished and before the speculum is removed, the surface of the eye is again flooded with the antiseptic bimiodide of mercury liquid When this runs away by tilting the head sideways, the speculum is removed

After testing the vision in finger counting, the eyes are closed The outer surface of the lids of the eye operated upon is wiped dry of the excess of the bin iodide solution which had covered them I now take a piece of very thin, diaphanous white silk isinglass plaster 1½ inch long and 1 inch wide, moisten this with the antiseptic solution, and lay it over the closed lids of the eye operated upon It extends from just under the eyebrow to the cheek and is wide enough to nearly cover the palpebral split, leaving the great angle beyond the puncta exposed for the escape of eye secretions, and also for the admission of atropia drops by capillary action, without disturbing the strap, should such drops be needed during the after treatment In its wet, softened and flaccid condition, the adhesive strap can be stroked by the spoon until every crease is effaced, and every eyelash, as seen through the strap, lies down smoothly upon the cheek This pressure of the spoon is continued till the isinglass plaster adheres firmly at every point and becomes dry I use the thin silk plaster in preference to the gold beater's skin, as suggested by Dr Michel, because it has more body and wears better Usually the one piece remains on for the five days needful for the firm corneal healing, and does not need replacing When using the gold beater's skin I found that, on more than one occasion, the action of the lid muscles had ruptured the film When this occurred on the third day it was not so objectionable, but when on the first day, before the corneal wound had healed, it was deemed an accident which could be prevented by using a stronger material When the plaster is dry the two lids are made, as it were, one, with such perfect support of the eyeball that there is no fear whatever of disturbing the wound by any movement of the head or body I now allow the patient to open his other eye, get down from the operating table and, if he has sight enough in the open eye to guide himself, walk to his room without assistance, after descending two flights of stairs in doing so

Every window in the hospital, chambers, halls and water closets, has blue shades, which keep out the sun, leaving the house pleasantly lighted When the patient reaches his chamber he may go to bed or not, as he pleases Usually they prefer to lay on the bed dressed, and not take off their clothes till bedtime My experience in the past year proves that patients do best who are least trammeled, therefore I give no orders about their movements, positions or diet, except to restrict them to their rooms for a few days, and prohibit the use of the opened eye for reading They may remain in or out of bed, as they feel disposed, dressing and undressing themselves If both eyes are not cataractous, they can see to eat with the opened eye, and enjoy their meals They are allowed to see friends, and have the days of confinement to their rooms pass as pleasantly as possible By means of this open eye they can take as good care of themselves as they did the day before the operation The patient is restricted from using the eye in reading only, and finds it of immense comfort in dressing, walking, and eating By this method of treatment very little nursing is required

Often the patient has no pain whatever during the operation or afterwards, the entire convalescence being absolutely a painless one Some, on the contrary, complain of pain in the eye during the first night after operation Should this night pain be sharp and make the patient nervous, a drop of a 1 per cent solution of atropia, put at the inner canthus, is sucked in between the lids and usually soothes promptly Rarely is it found necessary to administer morphine to allay this pain If the patient is nervous at bedtime and fears a sleepless night, a dose of the bromides with chloral is administered The use of this chloral mixture is the exception

When I visit the patients the day after the operation, I usually find them dressed, sometimes lying on the bed, or reclining on a lounge, sitting in a rocking-chair or walking the room for exercise They feel comfortable, have had their usual meals, and, if regular in habits, the morning call of nature By the light of the room (for no candles are needed for inspection), the plaster strap on the closed eye is seen a little wrinkled, and shows evidence of having been moist at the lid split The escaped secretions of the night have dried upon the strap and were not in sufficient quantity to disturb the adjustment or detach the plaster from the lid surface Through the transparent strap the lids are seen in their normal condition, no redness, nor swelling, nor mattering along the visible row of lashes The visit is designed for inspection only, for no dressing nor treatment of any kind is needed, and the isinglass strap is not disturbed The second, third and fourth days are usually duplicates of the first The patient has had no pain or inconvenience He has carried out pretty much his ordinary habits of life After a good night s sleep he has risen at his usual hour, dressed himself, washed his face, avoiding wetting the plaster by using the wetted end of a towel, eats his three regular meals without restriction as to articles of diet, has received the visits of his friends, and has been read to between times to make time pass more agreeably, the light of the room being sufficient to allow this The straps have been examined each day to observe their condition, but more especially to note the appearance of the lids and the condition of discharges which have dried upon the plaster The strap may show more wrinkles, but usually has remained firmly adherent. If found at any time loose it is removed, and a second adjusted Not once in ten cases is it necessary to renew the strap applied the day of operation

On the fifth day, the corneal wound having firmly healed and the strap having accomplished its work, it is removed by wetting it The liberated lids separate, and the restored sight to the eye is recognized at once by the patient The light of the room hav-

ing been sufficient at any time to inspect the condition of the lids, is also sufficient to allow of the inspection of the eye itself To those accustomed to examine eyes successfully operated upon for cataract extraction by candle-light, five days after the operation has been performed, when treated by compresses and bandages in dark rooms, one is at once struck by the absence of redness, weeping and sensitiveness to light which are the constant companions of the former treatment The patient feels a little moisture as the eye is first opened, but the surgeon does not see the tears coursing down the cheek as when the thick compresses are first removed With the removal of the isinglass strap no change is made in the daily life of the patient, or in his surroundings No smoked glasses nor eye screens are used, nor is the light of the room in any way diminished For two or three days longer he is restricted to the room, a little more light being daily admitted by drawing aside the window shade By the eighth day the patient is allowed the freedom of the house, and can go into any room from which the sunlight is excluded By the tenth day I have often found them with raised curtain looking into the sunny street, but this was a liberty which they alone were responsible for It was not advised, and yet no trouble came of it in any case At this stage of the convalescence the ordinary light of a living room is not offensive to the eye recently operated upon By the fourteenth day the patient is ready for discharge from treatment, having a strong eye, and often so little injected as scarcely to be recognizable from the one not operated upon For two weeks after dismissal I usually advise a smoked glass for the sunny street, but none for home use I have often found this advice disregarded, patients finding no inconvenience for street exposure and without the protection of smoked glasses Should they have them on, I find them looking over the rims, which means that the eye is standing all the exposure as if no glass was worn

In operating on patients at their own dwellings, they are never put to bed With one eye open they are able to exercise themselves by walking about their chamber By the seventh day they are down stairs in the shaded parlor, and are allowed to take their meals with the family, the dining room window curtains being lowered

This method of treating cataract extractions has been under my close observation for twelve months The method of leaving one eye open for guidance has been continuously used for four months, and in not a single case have I seen any harm whatever come of it My cataract and iridectomy cases treated by the isinglass plaster dressing number 167 With me it is no longer a subject of experimentation It has settled down with me as the regular method of treating such cases, and I now use no other I can truly say that bed operations, compresses and bandages, dark rooms, bed treatment, diet and restraints of all kinds, are no longer in use by me in eye practice My greater per cent of successes, to say nothing of the inestimable comfort to the patient, warrants me in the statement that I would be doing injury as well as injustice to my patients, should I go back to the old methods of after-treatment in constant use by me prior to May, 1886

This method of treating cataract and iridectomy cases, revolutionary as it seems, carries reasonableness on its very face An eye accustomed to strong light is not inconvenienced by it, and a healthy eye kept for a short time in darkness may soon acquire a sensitiveness which makes strong light annoying Everybody has had personal experience of this, when sitting at twilight in a room and the gas is suddenly lighted Cataract patients, under the long continued darkness of compresses and bandages, experience this the more especially, hence, under the treatment of seclusion generally in vogue, congested, watery, and sensitive eyes, the one not operated upon as well as the one operated upon, had to be, and must ever be, for such is the law of nature The reverse is equally the law of nature, and my everyday experience proves it Do not exclude light from cataract eyes and they will not be annoyed by it *In other words, the congestion, photophobia and lachrymation so constantly found in eyes recently operated upon for cataract extraction, when the heavy, thick bandages are removed are caused by the dressing, and are not a natural sequence of the operation* Change the dressings to the light ones and the irritation of the eyes will diminish to a wonderful extent

As to the diaphanous adhesive strap, it is infinitely preferable to the compress and bandage on account of admitting light to the eye, and also in its more perfect adjustment We will all acknowledge that after a cataract extraction, when we say to the patient, "the operation is now finished, close your eyes," that we believe that the lips of the corneal wound are adjusted and in proper condition for quick union All that any surgeon can wish for is to keep them so, and the closed lids are doing it Keep the lids closed and the desirable effects are insured Now, what is the best means of doing this? Is it by putting a piece of clean linen on the closed eyes, then a compress of cotton, well secured to the eye by a head bandage, or by using a light piece of isinglass plaster which really has no appreciable weight, and yet sticks to the skin as if it were a part of it, glueing the lashes to the cheek and making of the two lids one piece, to the perfect and permanent support of the front of the eyeball? Personal experience on the part of patients endorses the latter method I have patients who at intervals of two years have had cataract extractions made The first one was under compresses, in dark rooms and with restraint in bed, the second by an adhesive strip for one eye only, in a light room, and without any interference with their movements As by both methods they secured good sight, they are loud in their praises of the adhesive strap method, and look back with dread to the eight days of continuous night to them

The front of the eye is the prominent part of an elastic ball When pressure is made upon it, the prominence must be pressed in and the equator of the ball necessarily bulged out When the eye has been cut open near the line of the equator, as in corneal section for cataract, any pressure upon the eyeball by a well secured compress must tend to displace

the base line and disturb the nice adjustment of the lips of the corneal incision which the closed lids had effected If the compresses are not snugly secured by the bandages surrounding the head, then they do not interfere with the lid support, and are simply a useless incumbrance, annoying the patient by their weight, and their presence As the patient, under this dressing, is kept in bed, every movement of the head pulls more or less unequally upon the bandage, and must cause irregular pressure upon the cut eye ball, to its annoyance To keep up by the bandage just such a degree of support as not to cause more or less pressure, is more difficult than at first glance would appear The varied movements of the patient's head upon the pillow, with irregular drawing upon the head band, can never be taken into account, and yet they make an all important factor during the early days of treatment

The removal daily of the bandages for eye inspection, and the reapplication of a fresh dressing, is considered very comfortable to the patient, and the reason for his gratitude is apparent When a loose mass of elastic cotton is used as the compress—and it is by far the best—it is always found converted into a cake by the twenty four hours' wearing, and its natural elasticity is gone This is more especially the case when water applications are made This matted condition of the cotton compress is an indication of the extent that the eye has been squeezed by the head movements, for the cakey pad did not exist when the patient was put to bed The daily inspection of the lids, making removal of the compresses and their readjustment necessary, is agreeable to the patient for two reasons first, in replacing the cotton cake by a fresh, elastic piece, the patient gets rid of some of the irregular pressure which his night movements had occasioned, and secondly, he gets a glimpse of the daylight and a ray of hope for future sight—an inestimable reassuring comfort to one who has been confined to utter darkness for twenty-four hours

With the light adhesive strap the pressure must ever be just what nature intended The tarsal cartilages, which during a long life had been moulded by nature for the very purpose of fitting, by their smooth concavity, every point of corneal convexity, and thereby give absolute and perfect support, are kept in position as in sleep without pressure, by the tonic contraction of the palpebral muscle The adhesive strap, when properly applied, keeps the lid closed, and by so doing keeps up a permanent tonic contraction of the palpebral muscle It therefore becomes a perfect retaining and sustaining dressing

When this strap has dried on the lid, and had been properly adjusted, the eyeball is safe from accident No ordinary movement imparted to the body can affect it, and therefore confinement to bed, with all kind of restraints, becomes needless Under the general anæsthetics in former use in eye operations, with the retching and vomiting daily experienced, the light adhesive strap might have been deemed hazardous, and yet, when an eye dressed by the isinglass plaster is inspected, the thorough support given by the eyelid to the front of the eyeball would reassure any observer that it is a far better protection than the compress and bandages, and that the corneal wound cannot be influenced by any movements of the jaws or legs Hence it is that the experience of the past year has taught me that restrictions in eating, talking and walking do not influence the good results attained Therefore, to keep patients immovable in bed on their backs, fed on slops, and not allowed to converse, is an arbitrary exhibition of professional authority

Extract from an article on the "After Treatment of Cataract Operations," by Dr C Michel, in the September number of the *Archives of Ophthalmology*, 1886 "On the fourth or fifth day the patient is allowed to turn on the unoperated side, to relieve the aching produced by the dorsal decubitus, and from the sixth to the eighth day he is bolstered up in a sitting posture in bed, and the eye not operated upon left open From the ninth or tenth day the operated eye is no longer closed, and the patient is dressed and permitted to leave the bed for a chair "

For the last six months I have not put patients to bed at all, and leave the choice of bed, chair or lounge to themselves If they desire to go to bed, I do not object If they prefer to go to a lounge from the operating table and remain dressed until their usual bedtime, I equally do not object So confident am I that the eye well strapped cannot be disturbed by any ordinary movements of the patients, I place no restrictions in their way I can easily imagine the horror of the unmitiated, when they see my male patients pulling their day shirt over their heads the night after the operation, to replace it by the more easy fitting night shirt, and dressing again in the early morning When, after watching this most unusual proceeding for five consecutive days, hearing no complaints of pain or uneasiness, nor evidence of lid redness, or eye mattering, the adhesive strip is removed by wetting it—for it still holds on as if it were a part of the skin itself—the eye opens widely, with no weeping and but little injection, and bearing the exposure to the moderate light of the room for inspection without discomfort, his horror at first and subsequent surprise give way to admiration at the beautiful results in the absence of restraint

I do not know who invented the theory that the movements of the jaw, as in chewing, will impart dangerous movements to the corneal wound, and therefore should not be indulged in by patients recently operated upon for cataract Possibly movements of the temporal muscles may be transmitted to the head bandages and from them to the compresses The moment the bands encircling the head are omitted, the eyes are isolated from jaw movements The starvation of patients during the early days of a cataract operation, under the isinglass dressing, becomes unnecessary

The use of the adhesive strap and treatment in light rooms, as suggested to me by Dr Michel, was an immense improvement over the compress and dark rooms treatment Another great advance was made by me when I was enabled to eliminate, step by step, the bed operation, the bed treatment, and the diet list

The crowning work of my past year's experiences was when I freed the good eye from the bandage This was a bold step, and was undertaken with a great deal of anxiety I assumed that if iridectomies could be treated by bandaging only the eye operated upon, as my ample experience had already proved, cataract extractions might be similarly cared for

My first case was tried on February 18, 1887 The patient, a male, aged 50, in good health, had been myopic all his life In the right eye he had been getting blind for five years with cataract, now fully ripe In the left eye there were small marginal lens striations An ophthalmoscopic examination showed a very large irregular crescent of choroidal atrophy around the disc With a $\frac{1}{12}$ lens he had $\frac{1}{50}$ vision The cataract extraction, under cocaine, on the operating table, in the operating room of the Presbyterian Hospital, was smooth Only this eye was closed by an isinglass plaster strap, carefully adjusted The other eye was left undisturbed, enjoying all the vision he had before the operation He got down from the operating table, and without assistance walked up stairs into the ward, and was not put to bed As far as he individually was concerned he could appreciate no difference in his condition between the day before and the day after operation For the past five years he had had but one good eye for use, and he continued to use it as heretofore On my visit to the hospital the day after the operation, I found him walking about the ward He had retired with the other patients, and had also gotten up with them, and had all the privileges which the other inmates of the ward were enjoying. On the fifth day, a period which experience has taught me that protection was no longer necessary, I removed the adhesive strap By the tenth day I found him with other patients looking out of the window into the sunny street the blue curtain of the ward window having been drawn aside He was detained in the hospital longer than usual, seventeen days, because I considered him a case of unusual interest He went out without smoked glasses, deeming them unnecessary With $\frac{1}{12}$ + the vision in this eye was $\frac{20}{40}$, quite as good as in the eye not operated upon On ophthalmoscopic examination the eye from which the cataract was removed indicated also a large cresent with choroidal atrophy around the disc

This most satisfactory conduct of this patient's eye was an incentive for further trial of this new and revolutionary practice On February 23 the second case of cataract extraction was submitted to the same treatment, and on February 28 the third case As all of these did well, and seemed in no way injuriously affected by the great latitude allowed, it became from that time my established method of treatment Now all my cataract patients have the inestimable comfort of having an eye for their guidance during the treatment for cataract extraction This great privilege, with the freedom of their moderately lighted chambers and the simple transparent, light, permanent dressing, with no bed treatment, marks an era in eye surgery that cannot be too highly estimated From my present experience I can clearly see how the congested, watery, sensitive eyes, so constantly met with after the bandages have been removed in the ordinary method of dressing eyes after cataract extractions as to be considered a proper part in the convalescence, are clearly traceable to the restraining treatment It is the heavy bandages with the dark rooms that does it, because when I do not use the compresses, and keep my patients in light rooms, I do not see these complications, antagonistic to rapid convalescence In former years the Presbyterian Eye Hospital bought smoked glasses by the gross, and every iridectomy and cataract patient was supplied with them as soon as the bandages were removed Now there is not one worn in the hospital, and very few patients see the necessity of putting them on when they leave the house

The year's experimental work undertaken at the Presbyterian Eye and Ear Charity Hospital of Baltimore has shown conclusively that a cataract patient not submitted to darkness, but with eyes bearing the light throughout the entire treatment, will have strong ones when the strap is removed on the fifth day A very extensive experience of former years has also conclusively shown that if I keep an eye in the dark for even a few days, I will have one which must run water and show congestion when the light is admitted to it If an eye is strong when both eyes are only lightly covered, the eye operated upon will be stronger if only one eye be covered, and the good eye be permitted to enjoy its accustomed stimulus (light) undisturbed

If only as good results are secured by this rational treatment, over the method of compresses, bandages, dark rooms and restraints of all kinds, then why should not patients enjoy the comforts of the one when contrasted with the annoyances of the other?

My experiences of the past year show conclusively that not only is the patient made more comfortable by the plan suggested, but that a larger per cent of good results can be secured Of course there are certain unfavorable results at times obtained which no care can prevent No one should look for absolute success in every case Failures will now and then come to the most skilful Of the sixty seven iridectomies I lost none Of the ninety eight cataract extractions I lost five eyes

Case 1 —Mrs A , aged 71, extremely myopic, cataract well matured in the left eye Operation smooth Had some pains during treatment Left the hospital with good vision Some days after dismissal plastic iritis ensued, and the eye was finally lost Mrs A was in poor health, and was in deep grief from the recent loss of her husband I do not know whether the return to her home, with its sad memories, had anything to do with the subsequent inflammation This I count, however, as one of my losses

Case 2 —Mr R , aged 92, an old, feeble man Iritis came on during treatment, and the eye was lost

Case 3 —Mr B , aged 39, has had diabetes mellitus for years, and passes over a gallon of urine per day, loaded with sugar Has lost much flesh Cataract matured in each eye Left eye operated upon with restored vision, a perfect result, $V = \frac{20}{20}$ Three weeks afterwards right eye operated upon Inflammation ensued and this eye was lost

Case 4—Mr B, aged 65, cataract in each eye Much depressed in spirits, thought himself well off financially, but has recently been beggared Cataract fully formed in the left eye, still sees to get about with the right eye Cataract extraction smooth Eye pained from the first night, necessitating the liberal administration of opium During the day there was not much suffering, it always appeared aggravated at night The lid at no time red, nor any escaping secretions The strap was removed on the fifth day Cornea clear, eye injected, pupil free and fully dilated under atropia, which had been daily instilled Lymph masses seen in the vitreous Hyalitis had established itself which eventually destroyed the eye

Case 5—Mrs B, at 74, in very feeble health, cataract fully formed in the right eye for six months, has vision enough to get about with the left eye Lens extraction under cocaine smooth Commenced to suffer pain soon after the operation Lids commenced to swell by the third day, and the eye was lost by panophthalmitis A few days before she was operated upon four boys, aged from 10 to 14 years, were received from an industrial reformatory school All had purulent conjunctivitis with corneal ulceration and large iritic hernie Septic germs were found in abundance in the eye secretions from the eyes of these boys, and three had to have iridectomies to save the cornea from general sloughing By some oversight or careless manipulation this case seemed to me one of contagion

Case 6—Mrs K, aged 62, of a very nervous temperament, had a cataract fully formed in the left eye, and forming in the right eye Her everyday life was a very unhappy one, full of care and trouble She was the second wife of an old man of 80 nearly an imbecile, with a number of grown step children living in the house who were always making trouble Crying spells were of frequent occurrence during her treatment She had iritis which has thoroughly shut up her pupil She has a clear cornea and good light perception, so that there is a promise that this case can have sight restored by an iridectomy

If these cases be carefully analyzed, it may be considered an open question whether these eyes could have been saved under any method of treatment Call them all however legitimate losses, and they still make an excellent showing for the proposed method of treating cataract eyes after extraction operations, 92 useful eyes out of 98 extractions, is satisfactory eye surgery, and is not often excelled

This method of treating cataract and iridectomy cases after operation has given me great satisfaction The isinglass plasters and light rooms, as proposed to me by Dr Charles Michel, with the withdrawal of nearly all restraint, leaving the eye not operated upon open for the guidance of the patient, or the fruit of my own experiments, makes an after treatment which leaves but little to be desired

It is said that there is nothing new in all this, and such a statement is in a measure correct, as the following extract from Mackenzie on "Eye Disease," American edition, of 1855 will show

After treatment of Cataract Extraction Cases—The patient should be put to bed with as little movement of the head and body as possible The room is not to be made too dark The length of time a patient is to be kept in bed, is a point upon which there has been a wide diversity of practice Wenzel confined his patients to their backs, without change of posture, for a fortnight Phipps, on the other hand, examined the eye on the morning after the operation, applied a shade and allowed the patient to rise A middle course appears the most judicious It is improper to cover up the eye too closely, and still more improper to load it with dressings and bandages It is of the utmost importance however to keep the eyelids still, and prevent any attempts to use the eyes These objects are completely obtained by the straps of court plaster, from the employment of which I have never witnessed any bad consequences I generally allow those which are applied immediately after the operation, to remain on for two or three days, but if the eye is easy for four or five days

Desmarres in his "Treatise on Eye Diseases," published in 1847, also refers to the adhesive straps as his sole dressing From this extract so pertinent to the subject under discussion, (from Mackenzie's old work on eye disease,) it would seem that the common method of dressing eyes after cataract extractions, in Europe forty years ago, was by adhesive strips, and in moderately lighted rooms Also, while some operators were very rigid in bed restraints, keeping their patients immovable on their backs for several days, others allowed much more latitude, even to sitting up on the second day Why this good practice was abandoned and compresses with bandages substituted is not made clear Possibly the retching and vomiting accompanying the administration of a general anæsthetic, which about this time was introduced into eye surgery, seemed to demand more support and protection for the eye just cut open Now that the local action of cocaine has removed this ugly complication in cataract extractions, there is no good reason why the adhesive strap should not be reestablished and generally adopted as the best and sole dressing

The only great novelty in the treatment which I suggest is the leaving of one eye open for the guidance of the patient So far as I have consulted the old authors, I have found no mention made of this item A more careful search, however, may show that this is also no new thing

Grant it, that there is no real novelty in treating cataract cases as has been defined Operating in the amphitheatre, closing the eye operated upon with isinglass plaster, leaving the other open for the guidance of the patient, allowing him to walk from the operating room to his chamber, not putting him to bed, allowing him free movements and no restriction as to diet, or receiving the visits of friends, no disturbance of the dressings till the fifth day, then freedom from all restraints after that time, even to the exclusion of smoked glasses Also, grant that these methods as practiced by a former generation of eye surgeons have never been altogether abandoned Against all this I do not hesitate to say, that whatever may have been the method pursued in former times, it is now the habit of eye surgeons to treat cataract cases by the exclusion of light to eyes recently operated upon, by compresses and bandages, and in dark rooms and with bed restraints and afterwards by the wearing of smoked glasses Since I have found that these annoyances are uncalled for and do not add to the comfort or safety of the patient,

I have for the past year been making war systematically, against these universally established methods, because a large experience has taught me that the method of treating cataract extraction under bandage, in dark rooms and with bed restraints is unreasonable, unphysiological, and unnecessary

The year's work at the Presbyterian Eye and Ear Charity Hospital, of Baltimore, has proven to my entire satisfaction, and also to the satisfaction of many other surgeons, that the after treatment which I was carrying out is by far the most comfortable for both patient and surgeon, and is also accompanied by fewer accidents I have succeeded in making many converts to my way of treatment and before long hope to see compresses, bandages, dark rooms and restraints, considered as relics by all the friends of progress in ophthalmic work

MEDICAL PROGRESS.

THE TREATMENT OF COLDS.—DR WHITAN, R N, in a short article on the treatment of colds, says It is recognized generally that catarrhs are excited *de novo* by exposure to wet, cold, and draughts, most frequently they develop in delicate and in highly neurotic individuals When once a catarrh is properly established, the affected person's breath is infectious in the acute stage of the disease at least The question arises, What is the nature of the affection? 1 Is it a specific poison comparable to that of the infectious fevers? 2 Does the affection start as an idiopathic inflammation and develop a specific poison which is given off by the breath? 3 Is it of nervous reflex origin purely? An epidemic of influenza would be explained by supposing within large tracts of country all catarrhal micrococci become suddenly virulent, owing to some climatic or telluric fostering cause, or to some law of heredity, or evolution of the organisms themselves The usual coddling treatments of colds in an ordinarily healthy person should be strongly condemned, there is a deal of wisdom in the saying 'Starve a fever, feed a cold' A person with catarrh should take an abundance of light nutritious food and some light wine, but should avoid spirits and tobacco In the very old or very young, or in cases where the general health is not good, due care must be taken, and, above all things, depressants should be avoided The author recommends as a specific, both as a prophylactic and therapeutic remedy, the following prescription ℞ quin sulphatis, gr xviij, liquor arsenical, ♏ xij, liq atropinæ, ♏ j, extract gentian, gr xx, pulv gum acac, q s to make twelve pills One of these pills shound be taken every three, four, or six hours, according to circumstances If these pills are commenced in the early stage of a common cold, when the affection is confined to the nose and pharynx, the affection will be nipped in the bud At first one pill should be taken every three or four hours later on every six hours The author's experience goes to prove that a cold seldom lasts three days under this treatment, and believes that the remedy acts as a powerful nervine and general tonic, bracing the patient's tissues to resist the multiplication of the organisms which cause the affection —*Practitioner*, March, 1887

ACID CALCIUM PHOSPHATE INJECTIONS IN TUBERCULOUS JOINTS.—KOLISCHER recently exhibited to the Society of Physicians of Vienna four cases of tubercular joints, which he had treated by the injection into the diseased joints of a solution of acid calcium phosphate (strength and dose not reported) The method aims at the destruction of tuberculous bacilli and the induction of calcification of tuberculous matter, in imitation of what is often seen in healed pulmonary cavities It is supposed to produce a mild degree of inflammation and cicatrization, which destroys tuberculous matter In one class of cases prompt inflammatory reaction followed the injection, and this was followed by a period of calcification which lasted for from two to four weeks, and ended in absorption, the final result being restoration of the contour of the joint In another class, in which cheesy degeneration was in progress, the injections were followed in about a week by breaking down of tubercle, and rupture and discharge of the abscess, healing by granulation resulted The solution readily caused cicatrization of tuberculous ulcers and separation of necrosed bone Tuberculous fistulas and cavities were tamponed with gauze saturated with the solution Kolischer has cured two cases of acute tuberculosis of the elbow in children, with restoration of contour, normal motion, and absence of general symptoms, has greatly improved a case of tuberculosis of the knee, and has markedly benefited a case of acute tuberculosis of the carpal joint, with result of normal contour, filling of capsule with calcified material, and slight movements of fingers

PILOCARPINE IN NEURITIS AND MYOSITIS.—SEMMOLA reports the case of a lady, about 40, in good health, after standing in a draught was seized with great pain in the right shoulder and arm, the pain gradually increased, and all movement of the arm became impossible Massage, liniments, galvanism, with salicylates and quinine internally, were prescribed Months passed, but the conditions remained the same Semmola, on being called in consultation, recommended the prolonged Scotch douche, but as the administration of this was inconvenient, he suggested the hypodermic injection, every twelve hours, of a centigramme and a half (¼ gr) of hydrochlorate of pilocarpine There was considerable improvement after the second injection, and in four days the patient was practically well —*London Medical Record*, May 16, 1887

CEPHALIC VERSION IN PLACENTA PRÆVIA.—KUFFERATH thinks this operation bad practice, as we cannot hope to arrest hæmorrhage by changing a malpresentation, for the head, in cases where cephalic version is still possible, will not plug the bleeding surface —*Lancet*, June 11, 1887

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SPARTEINE AND NITROGLYCERINE IN MORPHIA HABIT

In a note on the "Modifications of the Pulse in Morphiomania," presented to the French Académie des Sciences in March, 1887, by Professor B Ball and Dr Oscar Jennings, the authors discussed the mechanism of the morphia craving, and showed that there is ischæmia of the general circulation during the period of privation, and that an injection of morhia administered at this time causes a disappearance of the psycho somatic suffering which constitutes the craving, and is followed by restoration of the pulse In a communication to the Académie de Médecine in March they stated that they had found that morphia craving can be appeased by other drugs which restore the pulse in a similar manner "We thought," they say, "it would be preferable to try heart tonics, and strengthen the action of this organ in moments of weakness To this end we have employed sulphate of sparteine, which fulfils most of the conditions, and can easily be administered by hypodermic injections We watch for the moment of weakness as indicated both by plateau in the sphygmographic tracings and by the intimate sensations of the patient At this moment we administer an injection of from two to four centigrammes, which may be repeated when necessary, and at the expiration of a few minutes we see the pulse strengthen and the craving disappear Another medicine which procures a passing relief of the symptoms is nitroglycerine Its effects, very similar to those of sparteine as regards the point in question, are at the same time much more rapid and much more ephemeral"

Since these reports were made DR JENNINGS reports, in the *Lancet*, of June 25, that he has administered sparteine and nitroglycerine repeatedly in fourteen different cases, and he is convinced that in these agents, properly administered, we possess a means which will enable any morphia habitué earnestly desirous of leaving off his intemperance to give up the habit That treatment of this kind is better than restraint need scarcely be argued Sparteine and nitroglycerine should be used only when really needed, and should not be at the patient's disposal Dr Jennings' experience is that the effect of nitroglycerine is most satisfactory and persistent in those cases in which there is a predominance of the "yearning" over the "craving"—in which the psychical symptoms are more distressing than the bodily But when there is more physical craving than mental suffering (morphia nostalgia) sparteine, which is a tonic to the circulation, gives better results than nitroglycerine alone And in the simultaneous administration of the two drugs, the one by hypodermatic injection, the other placed upon the tongue, Dr Jennings thinks we have a perfect remedy for the morphia craving in its double psycho somatic modality He thinks it will be found that those patients who say they receive no benefit from this treatment do not desire to be cured

DIGESTION OF LIVING TISSUE AND SELF DIGESTION

It is well known that partial digestion of the stomach takes place after death, and similar changes have been observed in the lower animals Frenzel would explain the rapid dissolution of amœbæ and infusoria on the theory that they are dissolved by a digest formed within themselves during life But the question has often been asked, why does not the living human stomach digest itself? The usual answer is that the alkaline blood circulating in the walls of the stomach prevents the action of the acid stomach juices Claude Bernard and Pavy found that the limb of a living frog or ear of a rabbit introduced into the stomach through a fistulous opening will be partly digested In order to test the matter further FRENZEL, (*Centralblatt fur Physiologie, No 1, Biologisches Centralblatt, vi, No 22*) has immersed a frog's leg in a solution of pepsin and a 2 1000 solution of hydrochloric acid In a short time the skin loosened in pieces, the muscles dissolved, and within an hour and a half the bones were bare The blood vessels were attacked as readily as other tissues After this experiment the solution in which the limb had been

immersed gave the usual reaction for pepsin The second leg remained unaffected in a two per cent solution of hydrochloric acid Under the influence of the pepsin acid solution the skin was first killed and then digested In a neutral pepsin solution a tadpole lived for twenty-four hours In these cases the alkalinity of the blood did not protect the living tissues The protection of the intestinal wall is usually ascribed to the mucus, but why cannot the pancreatic juice diffuse itself through the mucous layer This mucus is entirely wanting in the intestines of insects Why self digestion does not take place is as yet unexplained

CONDITIONS OF MEMBERSHIP IN THE NINTH INTERNATIONAL MEDICAL CONGRESS

"Rule I The Congress will consist of such members of the regular medical profession as shall have registered and taken out their ticket of admission, and of such other scientific men as the Executive Committee of the Congress shall deem desirable to admit The dues of membership for residents of the United States will be ten dollars ($10) There will be no dues for members residing in other countries Each member will be entitled to receive a copy of the *Transactions* of the Congress when published by the Executive Committee "

This rule, plainly defining the conditions for acquiring membership and participation in the approaching International Medical Congress, was adopted and published in English, French and German, in Circular No 1, issued and widely distributed in both this country and Europe by the Executive Committee more than two years ago It was repeated in Circular No 2, issued in July, 1886, and also republished in most of the medical periodicals of this country And yet we notice that some of our State and local medical societies have appointed *delegates* to the Congress, and we are often receiving letters making inquiries touching the same subject Hence we have again quoted the rule, and wish to state explicitly that the doors of the Ninth International Medical Congress will be open to all members of the regular medical profession, in all countries where such profession exists, who may apply to the Registration Committee in Washington, D C, enter their names in full on the roll, and take their tickets of admission Those residing in this country must pay at the time of registering the $10 From those residing in other countries no fee will be required

In regard to the registration of educated dentists, about which there has been some question, it is sufficient to say that the same rule will be followed as governed at the London Congress of 1881 The establishment of a Section of Oral and Dental Surgery is a full admission that it constitutes a part of the domain of general medicine and surgery, and that all who, by education and proper legal authority, practice in that special department, are "members of the regular medical profession " At the London Congress they registered with the common prefix "Dr," as did a large proportion of eminent members of the profession in other departments At the Congress in Washington it will be proper for them to register with the title Dr, M D, D M D, or D D S, according to the terms of the authority conferring upon them the right to practice their profession

FOURTH OF JULY CASUALTIES

As has been pertinently remarked, it is probable more people have been killed and maimed on July 4 since the establishment of this country's independence than were hurt by the British forces which attempted to shut off the present noisy celebrations And were Cornwallis and Burgoyne living to-day they might consider themselves amply revenged It cannot be doubted that the country would be better off if fire works and instruments of pyrotechnic patriotism could share the fate of the tea in Boston Harbor

The "celebration" casualties thus far reported in this city amount to almost fifty, some fatal and many serious The greater number are pistol shot wounds and injuries to eyes from explosions Besides these there were almost thirty fires caused by carelessness with explosives It seems that the American public might find some less dangerous method of manifesting its exuberant patriotic feelings, and surely it is within the province of health officers to bring the dangers more prominently to the notice of the public authorities There are ways in which fire-works may be safely indulged in, but the present freedom in the matter given to small children is unsafe Nor does the matter end with those who are in good health (at beginning of the day), the noise, which is sufficiently distracting to healthy adults, is undoubtedly a source of positive danger to very many sick persons It is much to be regretted that *the* events of July 4, 1776, did not take place on February 29 of that year

NEW TEST FOR MILK —SZILASI, according to the *Lancet*, of June 11, has recently proposed a new test

for pump water in milk It is based on the fact that sulphate of diphenylamine is colored blue by the action of an exceedingly dilute solution of a nitrate As well water always contains more or less nitrates, its presence in milk can be detected The test is thus carried out Twenty minims of sulphate of diphenylamine is placed in a small porcelain vessel, and a few drops of the milk to be examined are added to it If the milk contain even 5 per cent of average well water a blue tinge will gradually distinctly appear Sulphate of diphenylamine is very cheap, so the test may be readily tried

MORE LIBERAL CONTRIBUTIONS —We are informed that at the recent regular meeting of the New Jersey State Medical Society $400 were contributed to the entertainment fund of the International Medical Congress, and at the annual meeting of the Pennsylvania State Medical Society $1,000 were appropriated from the treasury, and $200 more added by individual contributions, thereby making the total $1,200 Thus the good and *necessary* work goes on

WESTERN PENNSYLVANIA MEDICAL COLLEGE — From the Announcement of the new Medical College at Pittsburgh, Pa, we learn that the class of students attending the first regular annual term numbered 57, of whom 21 received the degree of M D, which constitutes a very gratifying beginning The next regular college term will commence on the last Tuesday in September, 1887, and end on the 24th of March, 1888

SOCIETY PROCEEDINGS

ASSOCIATION OF AMERICAN PHYSICIANS

Second Annual Meeting, held in the Army Medical Museum Building, Washington, June 2 and 3, 1887

(*Concluded from page 24*)

THURSDAY JUNE 2, FIRST DAY

EVENING SESSION

The discussion on

HÆMORRHAGIC INFARCTION,

was opened by DR W M WELCH, of Baltimore, Referee Numerous experiments had been performed by Dr Welch with the assistance of Dr Mall, of Johns Hopkins University, to determine which of these theories was the correct one He presented as the result of his studies the following conclusions

1 The blood which produces hæmorrhagic infarctions comes chiefly, if not exclusively, from the collateral vessels

2 Hæmorrhagic infarctions in the intestine cannot take place merely from a reflux of blood from the veins

3 The blood pressure is very low in the region where hæmorrhagic infarction occurs in consequence of occlusion of the main artery

4 A certain degree of force of the collateral circulation is required to produce a hæmorrhagic infarction

5 No positive proof exists that a change in the vascular walls is essential to the production of a hæmorrhagic infarction

6 The hæmorrhage occurs by diapedesis

7 When hæmorrhagic infarction has taken place, the large and small veins are widely dilated with blood, and the arteries contain a smaller quantity of blood than normal There is stasis *in many of the veins and capillaries*

DR WILLIAM OSLER, of Philadelphia, the Coreferee, referred to the clinical aspects of the subject He reported the following case, J M, age 20, admitted to the Philadelphia Hospital, October 10, 1886 He had never had syphilis and was a healthy looking man He presented a clear history of typhoid fever with a sickness of six weeks, two years previously His present illness began with diarrhœa one week before admission For two days he had attacks of bleeding at the nose There was temperature of 102° with pain in the abdomen There was no cardiac murmur and examination of the lungs gave negative results The splenic dulness was increased By October 15 the temperature had reached 103° There was almost constant delirium There was some diarrhœa. Coldness of the feet appeared, and continued to increase in degree and extended up the leg The legs became tired and no pulsation could be detected in the femoral and popliteal vessels The patient died on the 17th It was supposed that there was thrombosis of the iliac veins with gangrene of the legs, which is one of the rare sequences of typhoid fever At the autopsy it was found that the lower portion of the abdominal aorta and also the two iliac arteries were plugged with thrombi There was general peritonitis, the right kidney presented a red brown infarction There were no ulcerations in the bowel, no endocarditis The lungs were normal There was an infarction in the spleen During life the blood was examined for microbes but none were found After death microbes were found in the spleen

Hœmorrhagic infarctions of the liver under ordinary circumstances is impossible A B, a hard drinker was admitted to the hospital September 27 His illness began in the previous June with vomiting and swelling of the abdomen The dropsy steadily increased He died two days after admission At the autopsy a large amount of fluid was found in the peritoneal cavity There was nothing special found in the heart or lungs The liver was remarkably cirrhotic Through the right half of the right lobe there were scattered numerous reddish-brown areas The walls of the portal vein were thickened and a large brown thrombus occupied the upper portion of its trunk The branches passing to

the right lobe were filled with clots The hepatic artery and vein were normal In this case the hæmorrhagic infarctions were in all probability due to the cirrhosis of the liver which had caused more or less obstruction of the branches of the hepatic artery The only other case of infarction of the liver which the speaker had been able to find was one reported by Recklinhausen

In the intestine hæmorrhagic infarctions are met with in two forms, one involving the mucosa, the other affecting the entire gut The former not infrequently ends in ulcerative necrosis The latter form of hæmorrhagic infarction is not common in man In the horse it is frequently seen resulting from thrombi formed from verminous aneurisms of the mesenteric and its branches This is a common cause of the severe and fatal colic so frequently seen in these animals In conclusion the speaker referred to the fact that in the lung it was not uncommon to have a vessel blocked without the production of an infarction An occasional cause of thrombotic infarction is local diseases of the pulmonary artery It sometimes results from the endarteritis induced by beginning tubercular processes

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FRIDAY, JUNE 3, SECOND DAY

DR E T BRUEN, of Philadelphia, read a paper on

BERGEON'S METHOD OF TREATING PHTHISIS

With reference to the effect of the injections of sulphuretted hydrogen on the bacillus tuberculosis, Bergeon does not claim that their number has been reduced in any considerable proportion of cases If the bacillus be the real cause of the disease we lack any agent which will destroy it Since February last he had employed Bergeon's method of treatment in sixty one cases Forty four of these cases have been benefited, but of these only three appeared to regain full health Two of these were cases of incipient phthisis with apparent consolida- of the apex of the right lung In one of these cases the bacillus tuberculosis was not found although five examinations were made In the other case the bacillus was found In these cases the apparent recovery has been associated with a decided increase in weight He believed, however, that the disease is simply latent The third case was one of broncho pneumonia In all the other cases the lesions were more or less advanced with the presence of cavities and profuse expectoration In the fifteen cases in which a negative result was obtained, the treatment in some was followed by temporary benefit The good results have consisted in lessening of the expectoration, diminution of the cough, lowering of the temperature and suspending of the night sweats In most of the cases there was a diminution of from fifteen to twenty beats in the pulse, and a diminution of half a degree in the temperature during the administration of the gas Even in those cases which were benefited, and in which the temperature had been brought to normal, there would be during the progress of the treatment occasional outbreaks with a return of the fever and the other symptoms These, however, disappeared under a continuance of the injections In order to determine the effect of the treatment on the bacilli, Dr E O Shakespeare made a number of examinations during the progress of the cases There has been no diminution in the number of the bacilli It was, however, thought that in those cases where the treatment had been continued for some time the reaction of the bacilli to the staining fluid was less marked Two cases have died, in one of these an autopsy was made This case had been under treatment for two months The walls of the cavity were moderately smooth and firm, but there was no tendency to cicatrization The results were of a decidedly negative character

Bergeon's method is chiefly valuable in those cases attended with bronchial catarrh He had had very little good effect in those cases where there was thickening of the lung without much catarrh The speaker feared that the trouble and detail necessary to the successful application of this method and the limitations of its power would cause it to be set aside for other therapeutic measures

DR F C SHATTUCK, of Boston, read some

CLINICAL NOTES ON BERGEON'S METHOD OF TREATING PHTHISIS

He had treated only seven cases by this method He had seen such improvement follow careful dietetic and hygienic management that he had not much confidence in the results claimed for special methods of treatment in these cases Any new method of treatment will often have an apparently beneficial effect through its influence on the mind, even in those cases which are incurable Six of the cases treated suffered with phthisis and five were in an advanced stage of the disease One was a case of chronic bronchitis with asthma and emphysema Four of the patients suffered with more or less pronounced collapse from the use of the injections Nausea, vomiting and diarrhœa occurred in several cases In one case, although the patient was weak, no local or general ill effect was observed In another case the treatment was continued four weeks with no ill effect The only benefit obtained was a diminution of the expectoration He presented the following conclusions

1 Toxic symptoms may follow the injections of sulphuretted hydrogen gas These are nausea, vomiting, general depression, collapse and perhaps headache

2 Strong artificial solutions of sulphuretted hydrogen gas with carbonic acid gas are apt to cause abdominal discomfort The risk of this is diminished by heating the solution of the former gas

3 This is not by any means a specific If useful at all it is only as an auxiliary to the more useful methods of treatment

4 The only benefit which we have seen that could be fairly attributed to the enemata was a diminution in the amount of the expectoration

In conclusion, the author stated that the impression which he had formed was that the good results which had unquestionably followed this method

of treatment, were attributable in large part to the stimulation induced by the employment of a novel method of treatment, which makes the patient feel that something is being done for him

Dr William Pepper, of Philadelphia, employed this method in twenty four cases Other treatment was frequently combined with the use of the injections In no case was the temperature brought from a febrile to a continuously normal condition The fall was not more than is seen in similar cases under other methods of treatment In twenty cases where the weight was recorded, there was in eight more or less gain Light pounds in 37 days was the greatest gain In six cases the weight remained stationary, and in six it was diminished The improvement in cough was not marked The expectoration was somewhat diminished in four, out of twenty four, cases Search was made for the bacilli in thirty cases and they were found in twenty seven In eleven cases the examination was repeated and only in four was there any apparent decrease Cases of night sweats were not numerous In one they were checked and in seven improved Physical examination showed no improvement in a single case The enemeta had a decided hypnotic influence in three cases The only unpleasant symptom of any real moment was colic This was complained of in eleven, out of twenty four cases Three others suffered so much that the treatment could not be repeated The colic was not often controlled by giving smaller quantities of the gas, nor did it seem to be influenced by the slowness of the injection

Dr H C Wood, of Philadelphia, after studying the cases treated by this method, came to the conclusion that it was of a certain amount of benefit The sulphuretted hydrogen should accomplish the same results when absorbed by the stomach as when taken up by the large intestine He had therefore administered the sulphuretted hydrogen gas in carbonic acid water He thinks that this is a distinct addition to pulmonary therapeutics He had tried it in certain cases with benefit

Dr Beverly Robinson of New York The pain which is experienced in many cases may be due to the fact that there are ulcerations in the intestine These may be present without the existence of diarrhœa I have under treatment a case in which the tubercular deposits in the lungs is associated with ulceration of the larynx The man has received a daily injection for the past ten days There has not been the slightest change in the appearance of the larynx

Dr James T Whittaker, of Cincinnati, had used the sulphuretted hydrogen gas both by injection and also by inhalation The effects under both methods of administration seem to be the same It mitigates the cough, relieves the fever, and lessens the night sweats It is, however, not a specific

Dr F P Kinnicutt, of New York, read a paper on

ATROPHY OF THE GASTRIC TUBULES—ITS RELATION TO PERNICIOUS ANÆMIA

He gave the histories of two cases in which the typical symptoms of pernicious anæmia were well marked At the autopsy in each of these cases nothing special was found in any organ but the stomach The inner surface of the organ was smooth Microscopical examination was made of numerous sections removed from different parts of the stomach Throughout a large extent no trace of gastric tubules was found In some parts the more superficial portions of the tubules could be found but the deeper portions could nowhere be made out There was also seen a peculiar hyaline substance in the shape of tubes and of drops Numerous irregular cells were seen near the surface of the mucosa The author thought that in this lesion of the stomach was to be found the explanation of a certain number of cases of pernicious anæmia

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AFTERNOON SESSION

Discussion of Dr Kinnicutt's paper

Dr Francis Delafield, of New York, said that in a number of cases marked changes in the mucous membrane of the stomach have been found He looked upon the lesion of the stomach as secondary and not primary

Dr F P Henry, of Philadelphia, The cases reported by the author taken in connection with other cases which have been recorded, demonstrate that there is a form of anæmia associated with, and I think dependent upon, atrophy of the gastric tubules That this condition is primary, and not secondary, is I think sufficiently attested by the fact that it is not found in any other condition

Dr William Osler There is unquestionably a group of cases of pernicious anæmia in which there are serious lesions of the gastric mucous membrane, although these lesions are not always the same I think that it is quite impossible to distinguish clinically the cases with gastric atrophy from the cases without these lesions In a case of two years' standing although the symptoms were marked, the autopsy revealed no serious lesion of the stomach

Dr E C Seguin, of New York, read a third contribution to the study of

LOCALIZED CEREBRAL LESIONS

The third case reported related to the location of the facial centre The patient, a boy of 7 years, was first seen in January, 1885 He had been complaining of numbness in the right hand The right leg and arm were slightly paretic There was no headache, and no aphasia Shortly after this, clonic convulsive movements occurred in the right cheek and both eye balls were turned to the right This lasted for over two hours At times the speech was thick There was no history of previous injury, and there was no evidence of pulmonary, renal, or arterial disease There was no cranial tenderness on pressure The tongue when protruded deviated to the right The diagnosis was meningeal adhesion over the precentral region Iodide of potassium was given in gradually increasing doses until from sixty to seventy-five grains were taken Early in April of the following year, symptoms of tubercular meningitis devel-

oped and the child died, after an illness of three weeks At the autopsy, the ordinary lesions of tubercular meningitis were found In addition there was a patch of adhesion situated over the left pre central gyrus and the caudal part of the second frontal gyrus This was one inch in diameter This would indicate that in the human brain the facial centre is in the caudal end of the second frontal convolution

The second case related to the situation of the leg centre A patient aged 49 years, suffered with paresis of the right leg and clonic spasm of the right abdominal muscles There were right hemi-epileptic attacks, the spasm beginning in the abdominal muscles and extending to the arm and leg These attacks were repeated without loss of consciousness Paralysis of the right leg and paresis of the right arm developed *There was no aphasia and no choked* disc Attacks of a syncopal character occurred, in one of which the patient died At the autopsy a large sarcomatous tumor was found, involving the cortex of the paracentral region gyrus Two small nodules were found in the white substance below the principal tumor This would indicate that the nerve centre for the leg was in the paracentral lobule

DR JAMES J PUTNAM, of Boston A man of 45, suffering with locomotor ataxia probably of syphilitic origin, suddenly developed convulsions of the right arm and leg, without loss of consciousness, and without change in the voice The symptoms relating to the arm entirely passed away, but the leg never recovered its normal condition The patient died some time later, and at the autopsy a small hæmorrhage was found at the lower edge of the paracentral lobule

DR F T MILES, of Baltimore A patient with Bright's disease suddenly became hemiplegic without the voice being affected The arm and leg were affected He rapidly improved, but the leg remained weak He complained a great deal of a dragging in the shoulder At the autopsy the only lesion that could be found was a hæmorrhage of the size of a bean in the paracentral lobule

DR H H LYMAN, of Chicago Some months ago I saw a case in which there was a sudden convulsion without loss of consciousness, the left arm being principally affected These convulsions were repeated There was a paretic condition of the left arm, which in a few days extended so as to involve the corresponding leg The convulsive movements of the upper extremity continued to recur They did not involve the face The patient died and a sarcoma was found on the right side occupying the position of the centres for the arm and leg

DR JAMES J PUTNAM, of Boston, read a paper on

FREQUENCY WITH WHICH LEAD IS FOUND IN THE URINE, AND THE SYMPTOMATOLOGY OF CHRONIC LEAD POISONING

This paper consists of analyses of eighty-six cases in which the urine had been examined for lead The following conclusions were presented

1 It is probable that lead may cause neurasthenic symptoms which may exist for a long time without other signs of poisoning

2 The same is true of fine muscular tremor, especially if associated with debility

3 The most important conclusion is, lead seems to cause, occasionally, a greater or less degree of the symptoms classed as spastic paraplegia, instead of the usual type of paralysis with atrophy and loss of the deep reflexes

4 Additional evidence is furnished of the importance of suspecting lead as a cause of vague cerebral symptoms such as are often due to syphilis

5 In one case of epilepsy in a person not predisposed, and where the probable first attack occurred at the age of 25, besides the discovery of lead in the urine, there was a slight weakness and impairment of electrical reaction of the long extensors of the fingers

Two cases of ataxia with extensor muscular atrophy, and other signs of peripheral neuritis, were reported, probably due to lead

DR I E ATKINSON, of Baltimore, read a paper on

FORMS OF TYPHOID FEVER SIMULATING REMITTENT MALARIAL FEVER

The object of the paper was to describe forms of typhoid fever in which all the usually characteristic symptoms are absent except mild fever These cases commonly occur during the late summer and early autumn They begin with a chill or insidiously, and assume a course of mild remittent type, never passing into a typhoid condition, never developing the characteristic symptoms of typhoid, yet absolutely uninfluenced by antiperiodic treatment They last three, four, or even five weeks, and almost always end in slow lysis and recovery They resemble malarial conditions except in the persistence of fever under strongly anti malarial treatment, and in the occasional concurrence of circumstances pointing to a typhoid origin There is no hebetude, the patient sleeps well, the tongue is slightly coated, there is almost never epistaxis, constipation is commonly observed, there are no bloody stools, no tympanites, no iliac tenderness or gurgling, and rose spots are usually absent The patient is bright and cheerful The more severe cases, after beginning as remittents, may gradually evolve typhoid symptoms Three cases were reported showing the type of fever described, occurring under conditions indicating their typhoid origin The diagnosis of these cases from remittent malarial fever often rests upon the crucial test of treatment It is admitted that occasionally antiperiodic remedies fail to control the malarial paroxysm, especially in pernicious and adynamic forms In milder forms the behavior under quinine practically solves the difficulty Where the full administration of the antiperiodic remedy for a number of days fails to terminate the attack, the diagnosis of typhoid fever becomes justifiable, and the prognosis can be made with a high degree of confidence Not often earlier than the second or later than the fourth week the fever will terminate, almost constantly by lysis, rarely by crisis In the future, a solution of the difficulty of diagnosis will be obtained through the knowledge derived from bacteriological research and culture observations

DR WILLIAM H DRAPER, of New York Dr

Atkinson has spoken of the aid given by quinine in the diagnosis My own experience confirms that of others with reference to the use of quinine as an antipyretic in typhoid fever Unless used in such doses as to produce a certain degree of collapse, it is useless, I believe that it does nothing more than to increase the discomfort of the patient If, in five or six days, the use of quinine does not succeed in checking the fever, we may conclude that we are dealing with a continued fever of the nature of typhoid

Dr John Guitras, of Charleston I have had an opportunity of studying these cases both in the North and in the South, and I have come to a conclusion different from that expressed by the author These cases present no symptom of typhoid fever with the exception of the continued fever, and this is a strong argument against their being typhoid These cases are so numerous as we go farther South that I would class them as a separate disease I have examined some of these cases of prolonged continued fever of southern countries *post mortem*, and have failed to find the lesions of typhoid fever In the South we have these three diseases, malarial remittent fever at one end, typhoid fever at the other, and between these we have cases of the kind described by Dr Atkinson My view of this fever is that it belongs to the class of functional fevers A simple continued fever may be set up by an excessive demand made upon any of the important functions of the body I have thought that in warm climates where constant exertion was required on the part of the heat centres to keep within limits the production of heat, a paralytic condition of these centres might be induced especially towards the close of a long and hot summer This fever presents none of the symptoms of a malarial affection, and is quite common in sections where malaria is unknown

Dr A Jacobi, of New York I think it a mistake to say that those cases in which the fever cannot be broken in five or six days by quinine are not malarial There are cases of remittent fever that will not be broken by quinine There is one aid in diagnosis which I have not heard alluded to, and that is the urine test This has frequently been of much service to me It is prepared as follows

Solution No 1 Sodium nitrite 1 part, water 200 parts
Solution No 2 Sulfanilic acid 5 parts, concentrated muriatic acid five parts water 100 parts
Add 1 1–5 part of the first solution to 50 parts of the second

Equal parts of this mixture and the urine are to be mixed Then add about 60 or 70 per cent of aqua ammonia In normal urine there will be only a slight discoloration, while in urine from typhoid fever there will be a deep purple discoloration

Dr R. H Fitz, of Boston An epidemic of an anomalous form of fever recently occurred in Boston among a number of emigrants The diagnosis lay between typhoid and typhus fever It was concluded that they were cases of typhoid fever One case ended fatally The intestinal lesions were of the most trivial character The enlargement of Peyer's patches was no greater than is seen in many cases of enteritis The lesions were so superficial that it seemed quite probable that they would have disappeared if the case had lived a few days longer

Dr W T Councilman, of Baltimore I think that a simple examination of the blood will enable us to differentiate between the continued malarial fevers and typhoid fever The organisms found in these cases of continued malarial fevers are very easy to recognize

Dr William Osler I have had three cases in which the examination of the blood aided in the diagnosis One was a case of continued malarial fever thought to be typhoid, another was a case of remittent fever supposed to be typhoid In both these instances examination of the blood showed the case to be malarial In the third instance the patient had a chill, which was repeated It was supposed to be a case of remittent fever, but the malarial organisms were not found The case pursued an atypical course, and when two weeks advanced in convalescence had a well marked relapse of typhoid fever

The report of the Committee on the Congress of American Physicians and Surgeons was received and adopted, and Dr William Pepper, of Philadelphia (with Dr Reginald H Fite, of Boston, as alternate), was appointed as the representative of this Association

OFFICERS FOR THE ENSUING YEAR

President, Dr William H Draper, of New York
Vice Presidents, Dr Francis Minot, of Boston, and Dr J Palmer Howard, of Montreal
Recorder, Dr William Osler, of Philadelphia
Secretary, Dr Henry Hun, of Albany
Treasurer, Dr W W Johnston, of Washington

The following were elected to active membership Drs A V Meigs, Louis Starr and J H Musser, of Philadelphia, Dr James E Reeves, of Wheeling, W Va , Dr William H Whitney, of Boston, Dr James Stewart, of Montreal, and Dr N Allen Starr, of New York

Dr John S Billings, of Washington, was elected to honorary membership

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, March 30, 1887

The Vice President, D S Lamb, M D, in the Chair

Dr S Lamb presented a specimen and gave the history of

A CASE OF SHOT WOUND OF LUMBAR SPINE, THE BALL LODGING IN THE CANAL, AND REMOVED AFTER DEATH, 18 5 YEARS AFTERWARDS

The situation of the injury of this case and the length of time which elapsed between the wounding and death seem to me sufficiently important to make it worthy of as minute a record as possible The historical data were mainly obtained from the mother of the patient, through letters written by him, and from his widow

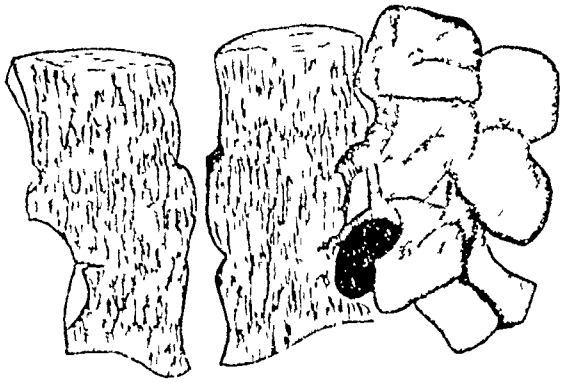
John H S then Corporal Comp "C," 36th Mass, of temperate habits Wounded May 8, 1864, at Spottsylvania court house, Va A rifle bullet entered the lumbar region, and lodged in the lumbar spine He lost at once the use of his lower limbs, was admitted to Field Hospital, wound probed for several inches without finding missile For four days the urine had to be drawn by catheter, and for a long time the fæces were removed by a rectal spoon May 13, was transferred to Campbell Hospital, Washington, arriving next day, stood the journey fairly well, 17, laudable pus discharging freely, sleeping fairly at night, 19, able for the first time to wash himself, 25, sitting up in bed propped by pillows, 28, could use all his limbs except his left foot, wound quite painful He gained strength slowly, by June 16, wound was nearly healed, and not very painful, but *there was pain in hip*, 23, back had been very painful at times, the pain beginning as a cramp and doubling him up, this recurring ever time he moved July 3, for the first time could lie on his back, had lain on his face and sides, still the cramping pain, 9, the cramps less troublesome, 16, leg aching badly, explained by gradual return of circulation of blood, 18, unable yet to use left foot, no sensation in left leg, 26, could move his legs about and bear some weight on right August 4, wound discharging again with less pain, in *trying to move left foot it doubled up, the toes* and heel nearly touching, 8, able by himself to get into a sitting position on edge of bed Cold compresses and ice had been pretty regularly applied to the back, 22, only able to sit up a little while at a time, because the weight of the upper part of the body seemed too great for the wounded back and caused intolerable pain, could stand up but left foot was useless September 1, sitting up, dressed, 17, furloughed to his home, arriving the 19th, tired out, although accompanied all the way by a hospital steward Was now confined to his room for nearly four weeks, could then move about without help, bowels generally regular, but there was dysuria, had much pain in back, no sensation in left foot December 3, returned to hospital from furlough, arriving the 5th and feeling very well, 24, discharged from service because of disability Returned home, applied himself to study at commercial school About February, slipped and hurt his back, causing severe pain for several days He grew steadily stronger July 17, 1865, appointed clerk in Treasury Department, Washington, his back was now much less painful and he had the use of all his limbs except the left foot The next information is that in 1868–9, at the Massachusetts General Hospital, Boston, a fragment of shell was extracted from the right thigh Dr W W Potter saw him in 1869 and found the temperature of the left lower limb, below normal, motion and sensation impaired and no muscular control over ankle joint This year he married He was then rather thin in flesh, had occasional severe pain in back, urine retained sometimes for twenty four hours and always passed with straining, constipated habit, under side of left leg and thigh cold, toes of left foot bent under, and so continued the rest of his life, he could throw the leg out but could not bend it, it felt most comfortable when elevated, during sleep there was spasmodic twitching of this leg Dr J O Stanton saw him in January, 1873, found partial paralysis of left leg, both motion and sensation, *with poor circulation, and foot* and ankle swollen, also open ulcer just above left hip joint discharging freely In May, 1874, Dr Cornelius Boyle being in attendance, Dr N S Lincoln in consultation opened an abscess of left hip and removed pieces of flannel, probed the wound to a depth of seven inches Patient unable to leave his bed till April, 1875 After this he had constant pain in back and left leg, especially in little toe, with slight intermissions of relief till death, when the toe was painful there was also vomiting He is said to have *had chills, fever and sweating every night, and the* mouth was drawn to the right side Dr Stanton saw him from time to time September 4, 1877, found the wound of hip healed up In August, 1881, the skin around left ankle broke, and discharged serum for the rest of his life, the veins of the limb being large In 1881–2 his right leg became thinner, the veins around the ankle large, but foot not swollen, left leg measured twenty two inches around calf In December, 1881, after complaining some time of headache, he had a tetanic spasm and was unconscious, similar paroxysms recurred in June, August, and on October 17, 1882, and he died the 18th *During the last two years of life* he was unable to attend to his clerical duties

Necroscopy by Dr Lamb, by request of Dr Stanton Body well nourished There was a depressed scar in right groin nearly one inch long, a second scar over lateral aspect of left ilium just below crest, a third one, circular, shallow, depressed and radiated, ¾ inch in diameter, one inch to left of middle line of back and just above level of crest of ilium

Right temporal muscle darkly congested, but there was no external sign of injury, *dura mater strongly* adherent to calvarium anteriorly, pia mater much congested, brain firm, puncta vasculosa well marked

Spine, last four lumbar vertebræ, cancellous substance red, the bodies showed abundant new formations of bone on anterior surface, and mainly on right side, most marked on fourth lumbar and adjoining cartilaginous plates, and third and fifth bodies, where there was a long thick exostosis, slight exostotic growth on the bodies posteriorly The body of the fourth showed posteriorly a conical depression, apex forwards and towards the right, one inch deep, and communicating by fistulous canal with tissues on front of cartilage between fourth and fifth vertebræ Posterior portion of body of fifth vertebræ also excavated to several lines in depth, encroaching rather on left side The section of the bodies showed the second was normal, for the remainder there was a dome shaped wedge of bone, apex of dome forwards, involving anterior part of fourth body, the wedge including the adjacent cartilages which were completely ossified and

adjoining parts of third and fifth vertebræ, this



wedge was denser than the rest of the bone and contained patches of compact substance There was some shortening of the total height of these anchylosed bodies, these three including the ossified cartilages measured but three and one eighth inches, while the normal second body was one and one eighth inch high There were flattened exostoses on the posterior wall of the spinal canal of the third to fifth vertebræ, their articular processes anchylosed, exostosis on right fourth transverse process anteriorly and fifth posteriorly, spinous processes of same three vertebræ united by bone, inter laminar spaces nearly closed by new bone To left of notch, between third and fourth laminæ posteriorly, were vertical lead marks, and in anterior part of body of fifth vertebræ, near lower edge, a little to left of middle line, a small fragment of lead was imbedded

Spinal cord Cauda equina opposite second vertebra normal, thence to the sacrum the nerves were so adherent and surrounded and infiltrated by inflammation as to be, *as such*, unrecognizable, and in this mass were small bits of bullet and larger pieces of bone, there was also some induration in the sacral portion of the cauda, and some fat in the canal The bullet lay in the depression in the posterior part of the body and adjoining left lamina of fifth vertebra, it lay with its apex forwards and showed loss of substance on one side of apex and same side of base, apex flattened, weight, one ounce and one grain, marks of saw in one side

Lungs much congested, heart appeared normal, liver and pancreas normal, spleen small, stomach and intestines normal, kidneys large, left weighing 6 5 oz , both very firm, capsule normal, cortex pale

The soft parts around the last three lumbar vertebræ showed dense inflammatory thickening several lines thick, from this place to each groin and to crest of left ilium was like thickening

The salient points of the case are these As shown by the scar, the bullet entered just to left of middle line and above crest of ileum, left side, and took a direction from left to right, upwards and forwards As shown by lead marks it passed between third and fourth laminæ, left side, into the canal and imbedded itself in the body of the fourth lumbar vertebra, rather in its right side The injury to the cauda equina is shown by the foreign bodies and consequent inflammation, hence the persistent low temperature of left lower limb, paralysis of motion and sensation of left foot, spasmodic contractions, habitual constipation and retention of urine I think that the first paraplegic condition was partly due to the injury to bone, and was therefore more in the nature of shock The primary injury of the bone was followed, of course, by inflammation, suppuration around the bullet gradually loosened that missile and caused it to drop lower in the canal behind the body of the fifth vertebra Portions of the bodies of the third and fifth, with most of the fourth, and the intervening cartilages, became one common piece of bone, whose total height was much under the normal, a fistulous tract also formed, leading forwards, abundant periostotic growths appeared on all the surfaces of these three vertebræ, both bodies and laminæ The inflammatory induration of tissue leading to each groin was doubtless due to pus following the coarse of the psoas fascia, the scar in the right groin was perhaps the point of exit on that side, but there is no history bearing on this There is no appearance of exit of pus in left groin, *nor any history* The scar on left hip is explained by the purulent sinus opened by Dr Lincoln to remove the bits of flannel, in May, 1874 No history could be had of the shell wound, beyond the removal of the fragment, no scar was noticed There is another thing not explained, viz , the fragment of lead imbedded in the anterior surface of the fifth vertebræ, it is impossible to conceive that a fragment of the bullet already described could have been in any way deflected to this location, and hardly possible to think of such a piece being driven through from the back

The diagnosis of this case was gunshot *flesh* wound of back I have not found a case near enough like it in injury, reported in the surgical volumes of the history of the late war, and with which I might compare it Recoveries from shot fractures of bodies of vertebræ are rare at the best, and it is not often that opportunity is afforded to examine the recovered cases, and determine beyond a doubt the location and extent of injury

DR N S LINCOLN reported a case of

POISONING BY BROMIDIA

He said that he had been requested to report the case, not on account of any scientific interest attached to it, but to show the danger of some of the proprietary medicines that people are in the habit of taking The victim in this case was a lady who had been for several years addicted to stimulants, and had also used chloral and chloroform Once, while in Boston, she took an overdose of chloral and came very near killing herself She was, however, resuscitated, and after that she gave up the use of drugs and alcoholics for about a year A short time ago, having by request visited the lady, he found her with a sore throat, and had also reported that she had not been sleeping well lately For her sleeplessness she requested to be given morphine hypodermatically This Dr Lincoln refused to do, but gave her instead a gargle for her throat He went to see her again on the evening of the same day, and on his arrival at

the house he was informed by the husband that his wife was up-stairs quietly sleeping Dr Lincoln went up to see her, and found her in a comatose condition and sinking rapidly Upon inquiry he heard from her daughter that the patient had been given a dose of the medicine prescribed by him, and that she had also taken some stuff from another bottle This bottle was hunted up and found to have contained bromidia With this for a clue to her condition he injected strychnia, applied warmth and electricity, and kept up artificial respiration He had it in mind to inject caffeine and atropia, but the supply of caffeine obtained was not good, and he dreaded to give together atropia and strychnia The lady died

It was found that the bottle, which contained 2 ounces of bromidia, had been purchased that day, and that during the preceding twenty days she had had the bottle filled four times As bromidia is said by the manufacturers to contain 15 grains each of chloral hydrate and bromide of potassium, with 1/8 gr each of canabis indica and hyoscyamus to the teaspoonful, it is evident that the lady took 240 grains of chloral that day, and possibly some more besides from the fourth bottle He has seen one other case of the bromidia habit The wife of a physician in an adjoining city came to him to be operated on for a cancer of the breast Upon examination of the breast no cancer was found, and he decided that the trouble was neuralgia, which view was afterwards concurred in by Dr Gross, of Philadelphia, whom the lady went to consult Upon her return from Philadelphia she came once more under his care The husband of the lady had warned him not to give her hypnotics during his treatment, so he assiduously avoided this class of drugs He was informed, however, by one of the ladies in the same boarding house, that his patient was in the habit of taking bromidia in considerable quantities She, however, never showed the effects of it, and he was unable to say how much she took Her husband soon took her home

It is probable that the effect of the chloral in the first case was heightened by the depressing action of the bromide of potassium He desires to enter his strong protest against prescribing proprietary medicines in general, and bromidia in particular Such mixtures should be kept by the druggists under lock and key, and if sold at all it should be only on the prescription of a physician

DR G L MAGRUDER reported a case in which a woman who had formed the alcohol habit had found solace from that in bromidia When he saw her she had been taking it for some time, and was exceedingly depressed and incoherent in her speech It took several days to recover her from this state, and during that time she had to be most carefully watched as she used all sorts of subterfuges to get more bromidia Three days ago a lawyer came to consult him about his throat The gentleman had not been sleeping well and had been using bromidia, which he had obtained without a prescription He has himself given up the use of all such things for the past ten years

DR S C BUSEY said that he had never prescribed bromidia, but he has seen the effects of it He was called to attend a lady for whom bromidia had been prescribed for sleeplessness She took 3 drachms the first night and slept well The second night the same dose had had no hypnotic effect, but on the next day she was maniacal, which condition, however, did not last long The prescription called for ℥j every three hours until relieved He has also had other patients tell him that they were taking it occasionally, but they showed no ill effects from it The other day a leading druggist told him that there was more bromidia being used than anything else in that line Its composition, and even the name of the manufacturer, is unknown, and there is no guarantee that it contains what is professed

DR G N ACKER said that a year ago he was treating a man for nervous depression The patient had been an opium eater and an inebriate, and he had attended him after several of his debauches When first seen this last time he was apparently in a state of *mania a potu* He discovered that the man had taken several 2 ounce bottles of bromidia in the past three days Luckily, vomiting had prevented him from keeping it all down, or he would probably have been killed He was finally relieved, but not without much anxiety and trouble He thinks there should be some law to prevent the indiscriminate selling of such mixtures, just as there is about selling poisons He has, however, had some good results from bromidia

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CHICAGO MEDICAL SOCIETY

Stated Meeting, May 2, 1887

THE PRESIDENT, W T BELFIELD, M D, IN THE CHAIR

DR JOHN BARTLETT presented a

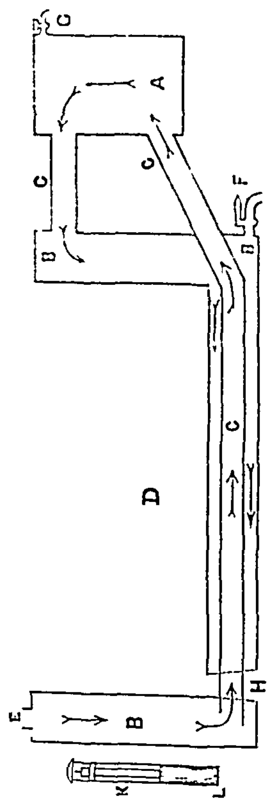
WARMING CRIB

It consists of an outer case of galvanized iron, or preferably of copper, and an inner smaller one Between the two cases is the water area, closed in all around Standing off some inches from the outer box is a small boiler connected by tubes with the water space The upper tube terminates immediately after entering the water area The lower one extends through the lower portion of the water space, to end near the opposite side of the box This is necessary in order to form an effective thermo syphon by means of which circulation of the water in the water space may be maintained, and thus an equable temperature of all parts of the crib

Leakage into the cradle-space might prove fatal to the occupant Against such an accident a safety vent is provided A conical tube is set, with the larger orifice downward, in the bottom of the crib space To prevent the ingress of cold air it is packed lightly with absorbent cotton If water gets into the cradle space it would run into the vent, wet the cotton, and cause it to fall out of the tube, leaving this free to act as a drain

One of the necessary attachments to such an ap-

paratus is a thermometer frame To determine the temperature of the water by the thermometer, without this attachment, is very unsatisfactory The column of mercury falls so rapidly upon removing the instrument from the water that it is impossible in this way to read the temperature accurately To obviate this difficulty, the expedient has been resorted to of placing the thermometer in a frame work of metal, so that the bulb and lower part of the stem of the instrument rest in a cup When the frame and thermometer are removed, the hot water brought up in the cup causes the mercury to retain its level and it may be easily noted



WARMING CRIB

A—boiler B—water space CC—thermo syphon tubes D—cradle space E—inlet F—outlet G—water guage H—safety vent K—thermometer frame with cup at 'L'

MEASUREMENTS FOR SMALLER CRIB RECOMMENDED

Outside measurement of crib (the figures have reference to the metal case) 26x26 inches outside depth 11½ inches size of cradle space 21x21 inches depth of cradle space 9 inches width of water space 2½ inches boiler 5 inches in diameter and 7½ inches long Pipes 1⅛ inches in diameter Safety vent 1⅛ inches at top at bottom 1⅝ inches Capacity of water space 12 gallons Distance of the boiler from the crib wall 5inches

MEASUREMENTS OF THE LARGER CRIB EXHIBITED

Outside measurement, 30x32 inches outside depth 14 inches size of cradle space 22x24 inches depth of cradle space 10 inches width of water space 4 inches Boiler 5 inches in diameter 9½ inches long Pipes 1¼ inches in diameter Safety vent 1¼ inches at the top, at bottom 1⅞ inches Capacity of water space 30 gallons Distance of the boiler from the crib wall 5 inches

NOTE —In arranging the bottom board and castors the carpenter should see to it, that the boiler stands at the proper height to accommodate the lamp to be used The Florence Lamp renders good service

It is desirable to encase the metal box with wood, both to retain the heat and secure additional strength The metal walls are not strong enough properly to sustain the pressure of a column of water ten inches high They bulge in all directions, indicating considerable strain at their seams The upward pressure on the bottom of cradle space in this incubator is 200 pounds The outer bottom and sides are therefore sustained by boards, and upward pressure upon the cradle space bottom is opposed by wooden standards, resting upon the ends of cross strips fitted to this bottom and held down by slats crossing from side to side over the top of the box

To use the apparatus, the water space is filled with warm water, preferably by means of rubber tubing, and the lamp lighted The water is never changed, and no attention is required further than to so adjust the wick of the lamp as to maintain the bed of the infant at the temperature desired With a little practice the flame of the lamp can be so adjusted by the eye, and the temperature of the incubator wall so estimated by the hand, that it will hardly be found necessary to consult the thermometer A given temperature of the infant's bed may be maintained within a few degrees with very little trouble The volume of water is so large that variations of temperature of the room, or in the amount of heat applied, are slow to induce a change in the temperature of the bed In this one a temperature of 92 degrees was generally maintained It varied between 92 and 86 degrees It was gradually allowed to fall to the latter point during a number of days preceding the final removal of the infant from the cradle A temperature of 122 degrees in the water indicated 92 degrees in the bed, the air of the room being at 70 degrees The gas stove or lamp used under the boiler should be capable of furnishing an abundance of heat, for the large crib here shown a coal oil lamp with a four-inch wick was amply sufficient It is convenient to have two of these lamps, so that one may always be ready when needed The bed is probably best made of horse hair or cotton, it fills up about one-half the cradle space The babe, dressed as usual, is covered by a woolen cloth, and over this rests a blanket sufficiently large to cover the whole top of the incubator, and thus to roof in the cradle space, except about the face of the infant

The incubator may be emptied of water by means of tubing attached to the discharge cock

DR DE LASKIE MILLER hardly thought it important to spend much time in commenting upon the couveuse after the description by Dr Bartlett It is an invention that is used successfully abroad, but he was not aware that it was used in Chicago The principles upon which it is constructed are manifest and important, the uniform temperature and the artificial feeding that is a part of the system in rearing feeble infants, are most important These two principles combined have in other places reduced the period of viability considerably, it is affirmed

DR F E WAXHAM had always used the hot water rubber bag in place of the incubator, using an ordinary basket well padded The rubber bag is then filled one-half or two thirds full of warm water and placed beneath the bedding If the water is replaced every three or four hours we can keep up a uniform

and satisfactory temperature This incubator possesses many advantages over the rubber bag, yet the rubber bag is quite convenient and can always be readily obtained

DR F C HOTZ read a paper entitled

THREE CASES OF SYMPATHETIC OPHTHALMIA ARRESTED BY EARLY ENUCLEATION OF THE INJURED EYE

(which will be published in a later issue)

DR CHARLES T PARKES reported two cases of

EXCISION OF CERVICAL GLANDS

One was in a child five years of age, the other in a child of twelve In the first case the mass was on the right side, the glands extending from the ear to the clavicle, there was no portion of the neck unoccupied by more or less of these glands In the boy of twelve it was even worse, as the photograph shows the glands extended beyond the midline of the neck posteriorly The trachea was carried two inches to the right of the midline by these tumors They interfered with inspiration, and failing to influence them by medical treatment they were subjected to operation and the glands all removed I have seventy-five of these glands which were removed from the boy of twelve years As far as the removal of the cervical gland is concerned it is a very simple operation to remove one gland if it is superficially situated, but when the deeper layer of glands are implicated, glands that are as extensive as these were, it makes a formidable operation In the latter operation there was not a blood vessel or a nerve in the neck below the parotid gland that could not be seen It was a very extensive operation, the most formidable that I ever attempted to do in anything of this kind The child lost a good deal of blood, notwithstanding the greatest of care In both cases, after the first incision, the knife was laid aside and not used at all unless necessary The incision was made over the most prominent part of the tumor and the mass laid open to view at once, subsequently the tumors were removed by scissors, keeping close to the growth It is a very easy thing to remove a superficial tumor, but it is difficult to safely remove these deeper tumors as they lie along the deeper vessels and in no instance should any tension be made on the tumor The capsule should be exposed to view and the tumor picked out of its bed slowly Dr Van Buren, in his late "Surgery," in the chapter on hæmorrhage, gives a graphic description of the terrors a young man got into by pulling upon one of these tumors and touching the knife to it while tense The first case I operated upon early in March, the boy recovered without any difficulty whatever

DR CHRISTIAN FENGER In connection with the extirpation of glands of the neck I wish to make a few remarks, and show a patient It is not exactly because this is a case of the same character as Dr Parkes's, but it is more to point out the limits of the possibility of operation on the neck This case is one of

SECONDARY CARCINOMA FROM CANCER OF THE LOWER LIP,

which was removed in December, 1884 In April, 1885, he came to me with enlarged glands on both sides of the neck and no relapse *in loco*, consequently no tumor on the lip Those glands were removed on both sides in the carotid triangle On the right side there was invasion of the facial vein with a thrombus about half an inch long, consequently that vein was ligated below the thrombus, between the thrombus and the jugular, before removing the tumor The invasion of a vein by any of the malignant tumors is a very grave complication, as we always expect a relapse In May, 1886, there was a tumor felt on the right side, the same side on which the facial vein had been invaded This tumor was about the size of a walnut when I removed it It had invaded the jugular vein so that an inch and a half to two inches of the jugular vein was removed It is natural that I should consider the case to be a hopeless one, as far as relapse is concerned, even after primary healing of the wounds, but, to my astonishment, the patient is well and there is no relapse anywhere The neck is everywhere perfectly free, and it is one year since the last operation Before the beginning of the second year after an operation for carcinoma most of them have relapsed, according to the statistics of von Winiwarter, 82 per cent relapse within the first quarter of the year, the relapses getting very rare in the second year Thus, when there is no relapse at the end of one year, we commence to consider the patient safe When we have to deal with malignant tumors on the neck there is a certain limit to operating which we cannot very well pass over

I will show a photograph of another case which represents the other side of the limit It was a carcinoma, not secondary but primary, in the lymph glands of the carotid triangle, or perhaps an alveolar sarcoma, I was not able to make a diagnosis The tumor was in the carotid region and was about the size of an orange, somewhat movable from side to side, and not from above downwards In these tumors there is a certain amount of immobility that will decide the surgeon beforehand to decline operating But the amount of immobility is somewhat disputed, as Konig and Friedel and others who have written monographs on operations in the neck state that, even if we have a tumor that feels rather immobile, we find that when we get down more and more, the tumor that seemed immovable from the beginning gets more movable and finally can be got out In the extirpation of this tumor not only the jugular vein was invaded (it was ligated double and removed) but the sheath of the common carotid artery was invaded There was no carcinomatous tissue, however, in the wall of the artery itself You will remember that the artery has a sheath separate from the common sheath, around the artery and the vein The artery was laid bare to the extent of over an inch on its outward surface The patient had on the third day a slight hæmorrhage, which was not reported, as it was thought it was unimportant, and five or six hours afterwards he had a final hæmorrhage which took only about a minute The microscopic examination of the wall of the carotid showed that there was no invasion of carcinoma tissue, but near to the place where the tumor had invaded the sheath

there was an island of granulation tissue in the intima, and this was the place where the artery ruptured As to the limits of the possibility of operating, I should put it where the malignant tumor has passed through the vein (which we can always remove with safety providing we keep our wounds aseptic) and into the sheath of the artery Here we meet with the danger of secondary hæmorrhage, and have to resort to ligature of the common carotid, which in itself is a dangerous operation

DR C T PARRIS It has been said with reference to these cervical glands, by a surgeon of good reputation, that it is always proper to do a surgical operation on them, because if you take out a few of the big ones the little ones get frightened and go away That has not been my experience, unless you get out all of the chain of glands that are implicated, the smaller ones are sure to enlarge rapidly soon after the operation I have several cases in my notebook, one an old man on whom I operated about six months ago The tumor was of immense size It was sarcomatous, and among other tissues the glosso pharyngeal nerve was divided, the digastricus muscle was torn off, and the lower half of the parotid gland removed under the supposition that it was a part of the tumor, and the facial nerve partly divided That man recovered It is not an unusual thing for a patient to recover from these operations on tumors in the neck It is my belief that a surgeon is not justified in operating on any of them where it is a malignant growth, or of such degree of malignancy that all the tissues are implicated in it, where the mass is fixed and immovable, because the patient will die either from the operation or the action of the disease If the attachments of the tumor can be pretty well defined, although immovable, certainly if *free and incapsulated, it makes very little* difference, because the records show that nearly all the important tissues of the neck have been divided in these operations, sections of veins, arteries and nerves made, without death following The cases related were merely instances of cervical glands

(To be concluded)

NEW INSTRUMENTS.

THE SURGEON'S PUMP

BY W J HERDMAN, M D,
PROFESSOR OF PATHOLOGICAL ANATOMY IN THE UNIVERSITY OF MICHIGAN

Seldom has the ingenuity of the inventor brought to the aid of the physician and surgeon a more useful instrument than that designed and manufactured by Mr E E Allen, of Grand Rapids, Mich, and named by him the "Surgeon's Pump" It combines the requisites of simplicity and efficiency in so evident a manner, and is so generally applicable to conditions arising in a great variety of disordered states of the system, that upon seeing it in operation one is disposed to smile at his own stupidity in not having thought of it himself

The invention consists of a rubber tube a yard or more in length, upon which a single loop is formed near the middle, and this loop enclosed in a circular wooden or metal box (Fig 1) Upon the inner sur-

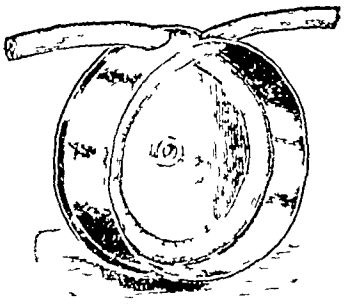


Figure 1

face of this loop a rubber roller attached to a crank is made to revolve, and the pressure upon this roller can be increased or diminished by a suitable arrangement of springs (Fig 2)

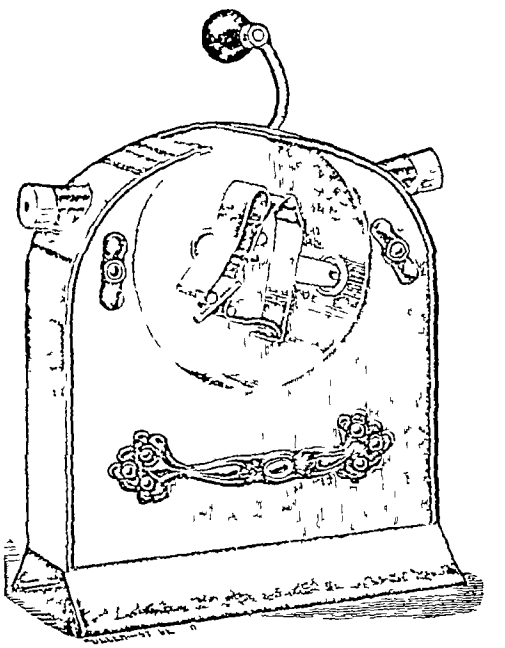


Figure 2

The range of application of this simple device, as will be seen at a glance, is almost unlimited where the necessity arises for withdrawing fluids from, or introducing fluids into, the body for any purpose whatever The suction and propelling power of which the instrument is capable would scarcely be credited by any one who has not seen it in actual operation, while the range of this power is all the way from nothing up to the extent of raising a column of mercury to the height of twenty eight inches simply by increasing the amount of pressure made by the rubber roller upon the coil of tubing The rapidity and steadiness of the current is wholly under the control of the hand moving the crank, while the current can be reversed at any moment Thus by suitable attachments to the extremities of the tubes this simple appliance may be made to serve the purposes of a syringe, an aspirator, a dilator, a douche, a blood transfuser, an air pump or a stomach pump

As a transfusion apparatus the instrument was first brought to my attention by Mr Allen some months ago, and it was for this purpose it was originally designed, and in meeting the conditions necessary for the ready transmission of blood from the veins of one body to another it is, as far as I am aware, far superior to any other instrument ever employed for this purpose It superiority consists (1) in the unimpeded and uninterrupted flow that can be established between the veins of giver and receiver, without any obstruction of valves or churning action of a bulb compressor, and (2) in the readiness and convenience of regulating the force and rapidity of the blood current by the proper management of the crank By means of it (3) the blood can be transmitted directly from the veins of one individual to that of another without the necessity of subjecting it to defibrination or any change or preparation whatsoever Of this fact I have abundantly satisfied myself by actual experiments upon animals in the presence of many witnesses, and the experiments of a like nature which Mr Allen has himself conducted in the presence of many able physicians, has established this fact beyond all questions If these experiments are properly conducted the coagulation of the blood, which would naturally be looked for upon the inner surface of the rubber tube, during its passage through it, does not take place, and all the constituents of the blood to the extent of 20 or 30 ounces are transferred without any change that has proved injurious to the animals receiving it

The proper temperature of the blood *in transitu* is maintained by surrounding the coil of rubber tubing with a water chamber, in which the water can be heated to the required degree

A very ingenious contrivance has been designed by Mr Allen, as shown in Fig 3, for placing over the

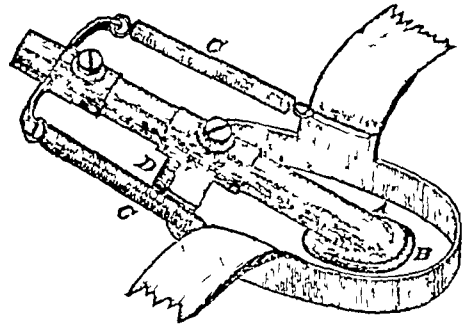


Figure 3

opening in the vein of the giver, and which avoids the necessity of introducing a tube within the vein in order to withdraw the blood, and thus one danger of phlebitis is obviated

As an aspirator this apparatus has the advantage of great range of suction power which can be readily increased and diminished as circumstances require, combined with the unparalleled convenience of a reverse action, which enables the operator to clear his needle from obstructing coagula or debris, or to wash out the cavity or abscess thus evacuated with a suitable antiseptic solution, without any other change than dipping the free extremity of the tube into the fluid to be injected and reversing the motion of the crank In cavities where considerable debris has collected and needs to be removed, as in cold abscesses, or the sediment remaining in the bladder after a calculus has been crushed a sudden suction force can be brought to bear upon such collection, and its removal be readily accomplished by introducing a wash bottle into the circuit of the tube and by a suitable shut-off, creating a partial vacuum in this bottle, and then suddenly opening its connections with the cavity containing the sediment to be removed, by which means such sediment is promptly sucked into the wash bottle through the catheter, canula or aspirating needle, that was introduced into the cavity No method so far devised for the removal of crushed urinary, caluli, or debris accumulated in other cavities of the body, or in abscess cavities, is equal in simplicity or efficiency to this

As a douche for irrigating the nasal, aural, vaginal or other passages of the body, this instrument is chiefly superior in possessing no valves to get out of order, and in the gentleness and steadiness of the current which it causes No injurious force of current is possible with it

As a stomach pump it is, as can be readily seen from its reversible action, much more serviceable than any now in use, since the stomach can be both emptied and again filled as often as thought necessary, by simply reversing the motion of the crank, and changing the free end of the tube from the jar containing the ejected fluid to that containing the injecting solution

As a dilator attached to distensible rubber balls, balloons or tubes, it has a field of usefulness in overcoming strictures, dilating passages and arresting hæmorrhages by compressing the bleeding walls of hollow organs, that will at once be recognized by the experienced practitioner Here either air or fluid may be employed as the distending agent

I have no mercenary motive in seeking to make known the usefulness of this invention In its manufacture or sale I am in no way interested

Box 91, Ann Arbor, Michigan

FOREIGN CORRESPONDENCE

STRASSBURG AND STUTTGART[1]

Kaberlé, his Methods, Treatment of the Abdominal Wound — Burckhardt — Stab wound of the Liver — Stab wound of the Stomach — Extirpation of the Larynx — Empyema of Frontal Sinuses — Antisepsis in Stuttgart Hospitals — Tuberculosis of Bone, Joints and Lymphatics — Peritoneal Sarcoma or Tuberculosis? — Osteotomy for Genu Valgum and Varum

Dear Dr Fenger —One of the most interesting men in Strassburg is Dr Kœberlé He is 65 years of age, and until recently lived the life of a bachelor in his comfortable and luxuriously furnished house opposite the Allerheiligen Hospital His young and beautiful wife has done her share towards his rejuvenation, and the climax of happiness culminated in the Kœberlé family on the appearance of an heir to the fame and fortune of the distinguished laparoto-

[1] By permission of Drs Fenger and Senn

mist For nearly half a century this faithful worker knew no pleasure outside of his profession, laboring faithfully in the interest of science and for the welfare of his fellow men, and is therefore entitled to the sunshine and happiness incident to a happy home, surrounded by his accomplished loving wife, and the innocent smiles of the prattling babe, certainly the most appropriate rewards this side of eternal bliss for a well-spent life Dr Kœberlé is a genuine Frenchman, who only makes use of his imperfect knowledge of the German language where no other alternative remains I met with a very kind reception, and spent a whole afternoon in his company at his house and in the Allerheiligen Hospital He answered my numerous questions willingly and fully, thus affording me a full insight into his methods of operating

From what I heard and read I am satisfied that he deserves to be called the inventor of the hæmostatic forceps, which in text books and catalogues are credited to his former intimate friend and now bitter enemy—Péan Kœberlé informed me that he had not used a ligature in his practice for the last twenty years Although he recognizes the importance of antiseptic precautions, he relies on thorough cleanliness, and only uses a solution of carbolic acid for his instruments That he is a believer in germs is evident from his practice, as he disinfects his hæmostatic forceps in the flame of an alcoholic lamp before every operation The hands are thoroughly cleansed with warm water and soap, and subsequently washed in a 4 per cent solution of carbolic acid He never uses a sponge, but relies entirely on pieces of dry cloth rendered aseptic by boiling The operating room is heated only to a comfortable temperature, as he believes the danger attributed to loss of heat during laparotomy has been greatly over rated For suturing material he uses ordinary Chinese silk, which before the operation is immersed in a 4 per cent solution of carbolic acid In tying the pedicle of an ovarian tumor he makes transfixion with an ordinary dissecting forceps, which is used in passing the double ligature In hysterectomy he resorts to two of his serre nœuds in controlling hæmorrhage, a tunnel is made through the centre of the pedicle with a blunt instrument and each side is compressed with an instrument, which are allowed to remain in the wound Great stress is laid upon the importance of not using these instruments as retaining measures, they must remain loose in the wound, as otherwise the wire would cut through prematurely He never resorts to protection of the abdominal contents, when protrusion has taken place, by compresses, cloths, etc, as he claims that microbes in the cloth might lodge upon the organ thus brought in contact, and produce infection

You will be interested to hear how Kœberlé treats the abdominal wound, he never includes the peritoneum in the sutures The sutures are passed down to but not through the peritoneum, nor do they embrace the skin The silk sutures are not cut short, the ends of two or more are twisted into a string, and are brought out of the wound, serving the purpose of a drain By disposing of the sutures in this manner he claims that he avoids the formation of parietal abscesses The skin is brought together with pin sutures The whole dressing is composed of a dry cloth compress and linen bandage The superficial sutures are removed after 24 to 48 hours, and further coaptation is secured by means of his favorite dry suture, made of strings of linen thread, which are twisted into a string on one side, while the other looks like a fan, which is fastened to the skin with collodion diluted with alcohol and ether Opposite points are tied together, and, as I had an opportunity to observe in two cases, served an admirable purpose in keeping the margins of the wound in accurate contact The deep sutures usually come away spontaneously after eight days He has never observed a ventral hernia after abdominal section in wounds treated by his method

Kœberle's supply of instruments is exceedingly limited, and after an inspection of his whole supply I could not but admire the man who can cope successfully with the most difficult cases with so few instruments Two small cases, containing perhaps two dozen of his favorite forceps, a few scalpels, scissors, hooks, anatomical forceps, and the indispensable serre nœuds, constituted the whole armamentarium chirurgicum Although I should not be willing to adopt all of his precepts, I am willing to confess that during my interview with him I had seen and heard many things which afforded food for serious thought Kœberlé is an original thinker, a fearless operator, and must be ranked foremost among the surgeons who are the recognized pioneers of abdominal surgery

During my trip I have been frequently impressed with the fact that some of the best surgical work is done outside of university towns Men whose names seldom if ever appear in surgical literature are doing excellent work, and it is to be regretted that the results of their observation and experience often fails to go on record, and thus science is deprived of a useful source of information A teacher who has to devote several hours a day to his classes cannot devote so much time to his patients or for reading and scientific research as a surgeon who only does hospital work and private practice Some of the best work I have seen has been by men who have charge of 100 to 120 surgical patients in some provincial hospital Most of these surgeons have at the same time a large and often remunerative private practice For instance, Medicinalrath Burckhardt, of Stuttgart, controls nearly all of the surgery in that rich and prosperous city and vicinity, and at the same time he has charge of the surgical wards in both hospitals He is one of the busiest men on the Continent, and knows how to make use of his advantages and opportunities The position of influence and eminence which he now occupies has been acquired in a remarkably short time, as he is not more than 40 years of age He is a thorough scholar, and familiar with current surgical literature His father is an old and respected physician in Wildbad The material which is at the disposal of Dr Burckhardt is immense, and represents every possible variety of injuries and surgical diseases, as I had an excellent

opportunity to verify during the two days I spent with him in his hospitals He is a very careful but bold operator, and a splendid diagnostician

About a year ago a man who had been stabbed in the abdomen was brought into the hospital The location and direction of the penetrating wound indicated that the liver or stomach was injured, and as the patient presented all the symptoms of acute anæmia it was evident that some large vessel had been injured Percussion proved that the peritoneal cavity contained a large amount of blood The patient was nearly pulseless, and it was apparent that unless hæmorrhage could be corrected death would soon follow Abdominal section was performed, and as soon as the abdomen was opened it was found that free bleeding continued from a large wound in the left lobe of the liver A rapid exploration showed that no other serious visceral wounds were present, and he turned his attention to arrest the flow of venous blood The usual hæmostatic measures for arresting hæmorrhage were out of the question, and it was finally decided to resort to the iodoform gauze tampon The entire track of the wound was firmly packed with several pieces of iodoform gauze and the end of the tampon was brought out of the abdominal wound to serve as a drain The abdominal cavity was cleansed as thoroughly as could be done under the urgent circumstances, and the wound closed, with the exception of an opening for the capillary drain Against all expectations the patient soon rallied from the collapsed condition, and recovered permanently without any further untoward symptoms For a long time a fistulous communication existed with the visceral wound The canal was dilated with laminaria tents and a piece of iodoform gauze removed from the depth of the wound After this the tract closed [1] In my address on "The Present Status of Abdominal Surgery," I suggested a somewhat similar treatment for visceral wounds of the liver, and the result of direct treatment of such wounds by abdominal section is certainly well illustrated by this case, and should stimulate others to adopt the same treatment in a class of cases which heretofore, on the expectant plan of treatment, has furnished a mortality of nearly 100 per cent

In the Katharinen Hospital I was shown an exceedingly interesting case in which abdominal section proved a life-saving measure for another class of visceral injury A circus rider, 30 years of age, had partaken freely of food and beer and soon after received a stab wound of the abdomen He was at once conveyed to the hospital, where he arrived in a dying condition It was ascertained that the abdominal cavity contained a large amount of fluid The opinion prevailed that the patient would die, and his ante-mortem statement concerning the quarrel was taken by an officer of the law The external wound was located to the left of the rectus abdominis muscle, and about two fingers' breadth below the costal arch From the location of the wound and its probable course it was surmised that the dilated stomach had been punctured With the consent of the patient the abdomen was opened from the wound in a downward direction to the extent of six inches The peritoneal cavity was filled with blood-clots, which were removed with the hand and sponges As soon as the stomach was brought into view a wound large enough to admit the tip of the index finger was found near the large curvature Hæmorrhage was freely taking place and required several catgut ligatures for its arrest The wound was closed with two rows of sutures Cleansing of the abdominal cavity was only imperfectly done, as it was feared that in the collapsed condition of the patient any further loss of time might prove fatal, and the local and general conditions appeared to preclude any possibility of ultimate recovery To the astonishment of all concerned, reaction commenced soon after the operation was completed, and on the third day the patient insisted on getting out of bed, as he had no pain or discomfort in the abdomen It is now sixteen days since the injury was inflicted, and the abdominal wound is closed, the appetite is good, action of bowels normal, no tympanitis, no pain As the patient insisted on leaving the hospital to day, permission was granted, however only after explaining to him that any ill consequences following such imprudence would rest exclusively upon the responsibility of the patient himself To all of these conditions he consented freely, and left the hospital a happy man and in the firm hope that in a few days more he would be in a condition to entertain the circus going citizens of Stuttgart

I had an opportunity to examine two patients who had recently undergone extirpation of the larynx In both cases the larynx was the primary seat of carcinoma, and as in neither case metastatic deposits in adjacent lymphatic glands had taken place, they were both considered as favorable cases for the operation One of the patients was a man 65 years of age, who was attacked with pneumonia on the second day after the operation, but is now recovering from the complication The second case was a woman of about the same age, who recovered from the operation without any untoward symptoms, but where the introduction of food without the œsophageal tube has proved very difficult, and where, in order to facilitate this process, a second operation was performed a day or two ago having in view the closure of the space between the open trachea and the anterior wall of the œsophagus Burckhardt prefers Hahn's sponge canula to Freudelenburg's instrument in all cases where the trachea requires plugging during an operation In two cases of empyæma of the frontal sinus I saw Burckhardt perform catheterization from nasal cavity with a delicate curved tube through which medicated solutions are injected

In both hospitals strict antiseptic precautions are observed For disinfection of hands spirits of turpentine is used Instruments are immersed in a five per cent solution of carbolic acid As an antiseptic solution corrosive sublimate is preferred Pads of antiseptic gauze and cushions of sublimated wood-wool are used in dressing wounds Most of the operations are performed in the Katherinen Hospital, where the operating room is located in a pavilion

[1] This case was described in THE JOURNAL, Vol viii, p 323

which is completely isolated from the main building Most of the surgical patients here live in barracks

Tuberculosis of bone, joints and lymphatic glands, as well as localized tubercular lesions in other accessible organs, are submitted to energetic use of the knife and sharp spoon, and it is claimed that since the practice of Bardenheuer, of Cologne, is imitated, the results have become more satisfactory

Among the more important operations that I witnessed here are the following A woman 30 years of age, who was delivered during the month of June last year, had suffered during the last months of her pregnancy from pelvic pains, which at times were quite severe She has not been well since Menstruation has ceased entirely She is somewhat emaciated, and at times the thermometer indicates a rise in temperature A physical examination reveals the existence of hard, irregular masses in the regions of both ovaries and broad ligaments It was impossible to make a positive differential diagnosis between pyosalpinx, tuberculosis and sarcoma, although the last condition was suspected A diagnostitial laparotomy was made to determine the character of the lesion and to proceed at once to operative measures, should the local conditions warrant such a course As soon as the abdominal cavity was opened the omentum presented itself in the wound, studded with small tumors the size of a millet seed to that of a pea, and the parietal peritoneum, when inspected, showed the same appearances No fluid in the peritoneal cavity The uterus appeared fixed by the masses on each side The diagnosis made was sarcoma, and the exploratory incision was closed Although I have implicit confidence in the correctness of the diagnosis *post incisionem* of Burckhardt, I could not resist the temptation to view the local product as a tubercular lesion, a suspicion which I based upon the history of the case, the symmetrical appearances of the masses in the pelvis on both sides, commencing in the region of the Fallopian tubes, and the extensive diffusion of the process along the peritoneal surfaces, as well as occasional rises in temperature One of the characteristic conditions of peritoneal tuberculosis—localized ascites, however was not present, but, as far as my observation goes, ascites is as much a symptom of peritoneal sarcoma as of peritoneal tuberculosis, and is not necessarily present in either of these conditions

At the last meeting of the German Congress of Surgeons numerous cases of peritoneal tuberculosis were reported as cured by simple exploratory incisions, and if my suspicions in this case should prove correct, and the same favorable termination should follow, my friend Dr Burckhardt will be the first to acknowledge his mistake In this connection I wish to express my doubts in regard to the correctness of the diagnosis in the many cases of peritoneal tuberculosis which have been reported as cured by such a simple measure as an exploratory incision I have no doubt in my own mind that many of these cases were not tuberculosis, but localized, non specific, simple peritonitis from which the patients would have recovered without incision, by simple rest I am strongly in favor of treating localized intra peritoneal tuberculosis by surgical measures, but in all such cases I should not be content until I had resorted to some measures directed toward the local condition, and having in view the complete or partial removal of the primary focus, and sterilization of remaining depots by the application of appropriate anti bacillary agents

In performing osteotomy for genu valgum and genu varum, Burckhardt does not perform the operation subcutaneously, but resorts to a free incision down to the bone, incises and reflects the periosteum at the point of section, and cuts the bone with a chisel sufficiently so that the balance can be readily fractured Before Esmarch's constrictor is removed all visible vessels which have been divided are tied, a small drain introduced and the wound sutured, an antiseptic gauze dressing applied and the limb bandaged upon a posterior tin splint The first dressing is changed after twenty four hours and the limb redressed in a similar manner The second dressing is removed in a week, when immobilization is secured by the application of a plaster of Paris bandage, or by weight and pulley and lateral support For one who is as familiar with the antiseptic treatment of wounds as Dr Burckhardt it may be perfectly safe to transform a subcutaneous into an open fracture, but for others less skilful or conscientious, the subcutaneous section of the bone deserves preference, inasmuch as experience has shown that, with ordinary care, injury to important organs can be prevented N SENN

BOOK REVIEWS

ANÆMIA By FREDERICK P HENRY, M D, Prof of Clinical Medicine in the Philadelphia Polyclinic, etc, etc Reprinted from *The Polyclinic* Sm 8vo, pp 136 Philadelphia P Blakiston, Son & Co, 1887

The want of a trustworthy guide in the field—or to many, the wilderness—which this little book covers has long been felt, especially in this country This book is the first systematic treatise on anæmia published in America, and embodies the results of years of study by a thoroughly competent worker It is not a compilation, but is based upon personal observations and accepted physiological and pathological facts The book is by no means so small as it may appear, for no words are wasted It includes Methods of Examination, Anæmia in general, Exciting Cauaes of Anæmia, Symptoms of Anæmia, Anatomical Characters, Diagnosis, Prognosis, Treatment of Anæmia in general, Varieties of Anæmia, Chlorosis, Anæmia of Puberty, Anæmia Lymphatica, Leucocythæmia, Anæmia Splenica, Pernicious Anæmia, Secondary Anæmia, Toxanæmia, Parasitic Anæmia Perhaps it would have been better had a more particular explanation been given of the various methods of examining blood, especially as the larger works dealing with this subject are by no means so clear as they should be The book is to be recommended in the most unqualified manner

MISCELLANEOUS.

LONG ISLAND COLLEGE HOSPITAL —During the spring term which closed the first week in June, the students had the opportunity of attending two cases of abortion and seventeen cases of labor in the new maternity wards of the hospital

CONTRIBUTION TO THE CONGRESS FUND —Since writing the editorial paragraph calling attention to recent contributions to the fund for the International Medical Congress, we learn that the Missouri Medical Association has contributed $300, and the St Louis Medical Society $200, for this purpose

JUBILEE MEDICAL HONORS —Dr Garrod, Mr G H MacLeod, of Edinburgh, and Dr Aitken were made Knights on the occasion of the Queen's Jubilee Dr James Alexander Grant, of Ottawa, was made Knight Commander of the Order of St Michael and St George There were ten other appointments and promotions of medical men

VIENNA PASTE IN DETERMINING ACTUAL AND APPARENT DEATH —Among the means of determining between actual and apparent death, says the *Medical Register*, M Peyraud regards cauterization of the skin by Vienna paste as one of the most certain In the living subject the eschar formed will be of a reddish black or brownish color, while in the cadaver it is yellow and transparent If the eschar is formed slowly, and is of a yellow color, the subject is dead, but if it is red, brown, or black, it may be assumed that life is not yet extinct

MISSISSIPPI VALLEY MEDICAL ASSOCIATION —The next annual meeting of this Association will be held at Crab Orchard Springs, Kentucky, commencing July 13, and lasting three days The attendance promises to be very large and the papers very interesting Among special topics for discussion will be "The Modern Treatment of Phthisis," "Intubation vs Tracheotomy," "Brain Surgery," "Abdominal Surgery," "Must the Ovaries Go?" besides others of importance The Society requires the same qualifications for membership as the American Medical Association

THE VETERINARY PROFESSION AND PUBLIC HEALTH —A well known veterinary surgeon has, in a letter to *The Times*, protested against certain recent statements calculated to reflect on the attitude of the veterinary profession towards the scientific study of animal diseases which are related to the health of man We are convinced that it would be unfair to attack the whole profession because certain of its members have recently appeared less willing to value scientific observation than we think should have been the case As matter of fact, however, diseases of the lower animals have hitherto been considered rather in relation to their effect upon these animals than to the health of man For this no possible blame can attach to veterinarians, it has been necessary in the first instance for the importance of these maladies to be recognized, but we are sure, now that some have assumed unexpected prominence, they will meet with all the consideration they deserve The scientific study of disease, whether of man or of the lower animals, has become more possible during the last few years, owing to the better opportunities which exist for its investigation, and a more definite knowledge is now expected than heretofore No public health department is complete without the aid of those skilled in animal diseases, and we anticipate the need for services of this kind will not less stimulate the inquiries of veterinary surgeons than it has members of our own profession It is not many years ago that human infectious diseases were not properly differentiated, it will probably not be long before those of animals are as well understood as are now human maladies of this kind With the possibilities of experimental inquiry which are open to the veterinary profession, it may, indeed, be expected that the knowledge of animal diseases will soon be more precise than that of human maladies —*Lancet*, June 25, 1887

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM JUNE 25, 1887, TO JULY 1 1887

Col Chas Sutherland, Surgeon, granted one month's leave of absence, with permission to apply for an extension of one month S O 126, Div of the Atlantic, June 23 1887

Lieut Col A K Smith, Surgeon, will be relieved from duty at West Point, N Y, on September 30, 1887, instead of on August 28, 1887 S O 144, A G O, June 23, 1887

Major J C McKee, Surgeon, granted three days leave S O 149, A G O, June 19, 1887

Major C H Alden, Surgeon, leave of absence extended to include September 29, 1887 S O 144, A G O, June 23, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY DURING THE WEEK ENDING JULY 2 1887

P A Surgeon C W Deane, ordered to the Naval Rendezvous, San Francisco, Cal

Asst Surgeon H N T Harris, ordered to the Naval Hospital, Mare Island, Cal

Medical Director A C Gorgas, remain on present duty until December 31, 1887

Medical Inspector C J Cleborne, remain on present duty until December 31, 1887

Surgeon Benj F Mackey, remain on present duty until December 31, 1887

Medical Director J Mills Browne, will remain on present duty as member of Retiring Board until June 30, 1888

Medical Director Richard C Deane, will remain on present duty as member of Retiring Board until June 30, 1888

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE WEEK ENDING JUNE 25, 1887

P A Surgeon John Guiteras, detailed for temporary duty at Key West, Fla June 23, 1887

P A Surgeon Eugene Wasdin, relieved from duty at Marine Hospital, New York, N Y, ordered to Marine Hospital, Chicago, Ill June 23, 1887

Asst Surgeon Seaton Norman, to proceed to Charleston, S C, for temporary duty June 23, 1887

Asst Surgeon F C Heath, relieved from duty at Chicago, Ill June 23, 1887

CORRIGENDUM

In THE JOURNAL of July 2, page 24, 2d column, 14th line from bottom, read *genu valgum* for germ valyum

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EDITED FOR THE ASSOCIATION BY N S DAVIS

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ADDRESSES

ADDRESS IN DENTAL AND ORAL SURGERY

Delivered at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY JOHN S MARSHALL, M D,

CHAIRMAN OF THE SECTION ON DENTAL AND ORAL SURGERY, CHICAGO, ILL

The year which has just closed has been one of steady advancement in the department of Dental and Oral Surgery, though I am unable to report any particularly new discoveries or brilliant achievements

The investigations in the etiology of dental caries by Drs Miller, of Berlin, Mills and Underwood, of London, and Black and others of our own country are still being pursued by these gentlemen, but no recent important announcements have been made The opinion that the disease is caused by micro organisms developed in the mouth is, however, rapidly gaining ground, for the conclusions reached by these investigators point very strongly in that direction

A great deal has also been written during the year upon the treatment of pyorrhœa alveolaris, but very little has been added to the knowledge we already possessed of its etiology The most notable improvement in methods of treatment is that introduced by Dr Adair This consists in applying to the roots of the teeth, after the concretions have been removed, a saturated solution of iodine in wood creasote, and then filling the pockets with tannic acid dissolved in glycerine, to form a protective dressing, and repeating this treatment once each day until the pockets are closed by new tissue A method very similar to this was introduced by Dr W H Atkinson some twenty years ago, and which at first met with very general adoption, but soon fell into disuse

Since the introduction of Dr Adair's remedies many have called to mind those of Dr Atkinson, which consisted of four formulas, viz

1 Chloride of zinc and resublimed iodine, equal parts rubbed together

2 Saturated solution of iodine in alcohol

3 Saturated solution of iodine in wood creasote

4 Pure wood creasote Later he substituted caustic potash and crystalized carbolic acid, rubbed to a paste in a warm mortar, and which are now being used with much better success than formerly, doubtless owing to the fact that the disease itself is better understood, and consequently the remedies needed for its successful treatment

New instruments for various purposes and of unique forms have been invented almost without number, consequently we cannot take space to enumerate them Some are real improvements over the forms already in general use, but the greater number are of no real practical value, except to furnish employment for the instrument makers

The subject which has seemed to occupy the minds of the dental practitioners more perhaps than any other, has been that of *pulpless teeth* and their treatment Not that there has been any change in the mode of treatment, for this seems to be as nearly perfect as it is possible with our present knowledge to make it, but rather because they have been called upon, by one of our leading medical journals, to defend their practice The journal in question condemned the practice of treating and retaining in the jaws teeth which were diseased or dead, upon evidence, which to the dental specialist at least, seemed very meager, indeed, and then drew the conclusion, that as a result of such practice, "nervous diseases about the head were becoming alarmingly common[1]" While the editor in the same number of the journal calls attention to the article from which the above is quoted, and says it "furnishes additional evidence of the perils of tooth saving" These articles immediately brought out several vigorous protests from the dentists, but the discussion of the subject was cut short by the editor, as it doubtless seemed likely too become too voluminous for the pages of his journal But the vital question as to whether *dead teeth* could be retained in the jaws, be made useful and at the same time inoffensive to the general health of the individual, did not receive the attention that its importance would seem to deserve. The term *dead teeth* is usually applied to teeth which from disease or traumatism have lost the vitality of their pulps, and not in its broader sense, for that would imply also a loss of vitality in the cementum and the pericementum Teeth in this condition would give rise to irritation and acute inflammatory processes of the surrounding tissues, and like all irritating foreign substances be soon expelled from the economy

The term *pulpless teeth*—one in common use among dentists—better describes the condition of the teeth under discussion, and hereafter when referring

[1] Medical Record, Vol 26 No 14 page 374
[2] Idem 379

to this condition I shall confine myself to the use of this term The teeth, as is usually understood, receive their nutrition and sensation from two distinct sources, viz through the pulp which fills the central canal, and the pericementum which covers the root The pulp is largely composed of blood vessels and nerve fibres, which are continuations of the maxillary arteries and nerves, while the blood vessels and nerve-fibres of the pericementum, with the exception of a few small twigs from the above mentioned sources, are derived entirely from the gingival arteries and nerves

The pupil gives vitality to the dentine and the enamel, which makes up about four-fifths of the bulk of the tooth, but which contains only from 13 to 18 per cent of organic matter when taken together The pericementum, gives vitality to the remaining portion, viz the cementum, which is analagous to bone and contains from 30 to 40 per cent of organic material, and it is through the pericementum that the teeth have their attachment to the alveolus

The death of the pulp *per se* has no effect upon the functions or vitality of the cementum or the pericementum, for their is no direct communication between them, and experience teaches that these tissues may perform their office in a normal manner for an indefinite period after the destruction of the pulp, provided the dentine has been treated antiseptically, and the central canal hermetically closed at the apex of the root

In advanced life there is a tendency to obliteration of the pulp by peripheral calcification, a process similar to, if not identical with, the formation of the dentine Many times the pulp will be found reduced to a mere thread, and in others the bulbous portion is entirely calcified The functions of the pulp in these cases are more or less impaired or destroyed, but no discernible effect is produced, either upon functions of the cementum or the pericementum

There is, however, a form of calcification of the pulp known as interstitial, in which nodules of secondary dentine or osteo dentine are formed in the body of the organ, which frequently gives rise to severe neuralgia of the face and head, and reflex irritations resulting in diseases of the eyes and ears

In the articles referred to, the cases cited to substantiate the conclusions at which the authors arrived, presented no satisfactory evidence that would indicate the teeth as pulpless, or that they were the seat of alveolar abscess or pericementitis, in fact, the evidence was strongly in favor of the supposition that the reflex irritation mentioned, was caused by an irritated and inflamed condition of the pulps, the result of an advanced stage of caries The question which very naturally arose in the minds of all intelligent dental practitioners who had carefully read the articles, was whether the gentlemen who criticized the methods of treatment pursued by dentists in the treatment of pulpless or diseased teeth, and which has been the means of saving thousands and tens of thousands of teeth in a useful condition, some for ten, twenty, thirty, and even forty years, without detriment to the general health were competent to criticize, and whether after all they really knew the difference between a simple case of pulpitis and one of pericementitis, or anything whatever of their symptomalogy

There is no doubt that teeth which are diseased from alveolar abscess, (the result of the death of the pulp) accumulations of salivary calculus about the necks and roots, pericementitis or irritation and inflammation of the pulp from caries, etc, occasionally give rise to acute neuralgias of the head and face, and reflex nervous irritation, resulting in functional derangements and organic diseases of the eyes and ears, but that this is by any means common I do not believe, nor is the radical treatment insisted upon by these writers, viz, the extraction of all suspicious teeth, the only or best treatment to be recommended, for the greater proportion of such cases are amenable to scientific treatment The dentist who would practice such wholesale and ruthless destruction of the teeth would not be worthy the name of dentist, for it would be contrary to the natural impulses of humanity and against all sound surgical principles The educated dentist has been taught that it is his mission to *save* and not to *destroy* the teeth, and all his energies are brought to bear in this direction, while extraction is to be practiced as a *dernier ressort*

Pulpless teeth which have been treated by removing the devitalized or putrescing pulp, the central canal and the canaliculi of the dentine rendered antiseptic, the apical foramen hermetically plugged with an indestructible and non irritating material and the canal and cavity of decay properly filled, will, in nine cases out of ten, give rise to no untoward symptoms, and remain in the jaws indefinitely in a serviceable condition, the truth of which no doubt can be vouched for from personal experience by many gentlemen of the Association It occasionally happens, however, that a pulpless tooth, from the small size of its central canal or a sharp curvature of its root, cannot be successfully treated in the manner described, these will in many instances, sooner or later, give trouble from alveolar abscess, but because a few unfavorable cases can not be treated with success is not a good reason for discarding the treatment

Inflammatory conditions of the pulp, especially the subacute and chronic forms, very much oftener result in facial neuralgia and reflex troubles of the eyes and ears, than do pulpless teeth which have been treated by the method just described, "although no appreciable irritation may be experienced by the patient in the affected tooth[3]" Such cases can be cured just as readily and permanently by the devitalization of the pulp, followed by the usual treatment for pulpless teeth, as by the heroic measure of extraction, and be infinitely better for the patient A sufficient number of cases might be presented, gathered from the published records, to satisfy any fair minded member of the Association of the truth of these statements, but the time at my disposal will not permit me to do so

One of the authors of the articles referred to "re-

[3] Medical Record, Vol xxvi, page 525

gards the treatment of pulpless teeth by the practice in vogue, as the reverse of procedures founded on well established surgical principles, since the stopping of the natural outlet for the escape of putrescing products from portions of the pulp left remaining in the canal, and dental canaliculi through the exterior part of the tooth itself make their passage into the tissues underneath unavoidable The diversion of the drainage must be of questionable propriety in many instances, since the tissues about the roots of the dead teeth are liable to become infiltrated with the products of decomposition, the absorption of which, when slowly formed, is much more liable to contaminate the system than the discharge of pus into the mouth from an alveolar abscess[1] The argument looks plausible, and if the statements upon which it is founded were correct, it would be unanswerable, but unfortunately for the writer and his theory they are not He speaks of closing "the natural outlet for the escape of putrescent products, etc" from the tooth Which is "the natural outlet" the apical foramen or the cavity of decay? I answer, that depends upon circumstances When there is no communication between the central canal and the cavity of decay the apical foramen is the *only* outlet, when the cavity of decay communicates with the central canal then the cavity of decay becomes the *natural* outlet Other things being equal an abscess left to itself always chooses the shortest and quickest route—the one offering the least resistance—to the point of outlet But it is the duty of the surgeon to cut short the process by giving exit to such accumulations of pus or putrescent material, wherever located, at the earliest possible moment, and thus shorten the period of suffering and remove the danger from septic poisoning The same obligation rests upon the dentist

When there is no communication between the cavity of decay and the central canal through which discharge can take place, gases are formed by the processes of decomposition, and septic material is forced through the only outlet, the apical foramen

The root of the tooth being imbedded in a bony alveolus and surrounded by the tissues of the face and mouth, septic products discharged at this point not only immediately set up inflammatory action, resulting in acute alveolar abscess, but from its location and the character of the tissues to be penetrated in seeking an outlet, several days are required to accomplish it, and this, unless operative measures are employed for its cure, soon becomes chronic and more or less constantly discharges as the case may be, either into the mouth, the antrum of Highmore, the nasal fossa, or through the external tissues of the face, and which not infrequently if left to run its course, terminates in other and more serious complications Such cases, however, can in a majority of instances, be *arrested* in their course, and in still a greater number *prevented* if taken in time, by giving exit to the contents of the pulp canal by simply drilling an opening into the canal through the cavity of decay, or other convenient location, and removing the septic material This is the treatment pursued by reputable dentists Is it a proceeding contrary to sound surgical principles?

When the apical foramen has been properly closed there is usually no more trouble with alveolar abscesses, for septic materials are prevented from coming in contact with the surrounding tissues Is such practice "the reverse of well established surgical principles?" I think not It is nature's own method of trying to prevent a recurrence of the disease, for it not infrequently happens that the apical foramen in pulpless teeth, after a time becomes completely closed by a deposition of secondary cementum, doubtless the result of this previous irritation of the pericemental membrane Can we go far astray when we follow such teaching? Are we not constantly trying to understand the processes by which nature restores a diseased organ to health, and the laws which govern them, that we may profit by the knowledge, and so shape our treatment as not to antagonize them, but rather prove helpful? This is what the dentist is trying to do by the method pursued in treating pulpless teeth This is not empiricism, but enlightened, rational practice

Furthermore, when the central canal has been thoroughly cleansed by removing the remains of the devitalized pulp, the apical foramen sealed, the cavity properly dried, the dentinal canaliculi rendered antiseptic by appropriate treatment, the central canal and cavity of decay so plugged as to exclude air and moisture, it is hardly possible for "products of decomposition to be formed in the canal or canaliculi, pass into the tissues beyond and be absorbed"

The antiseptics generally used are wood creasote, carbolic acid and bichloride of mercury, either of which will prevent decomposition, but when, as in this method of treatment, the effect of excluding the air and moisture is added to the power of the antiseptic remedy, it seems almost impossible for decomposition to take place It is admitted that in those cases which have not received appropriate treatment such conditions do exist, but even in these extraction is not called for, as it is yet possible to place a good proportion of these in a healthy condition

In behalf of our specialty, I, therefore, enter a most earnest protest against the principles set forth in these articles, in so far as they attempt to prejudice the profession against a line of treatment that has stood the test of time and proved so signally successful in the hands of dental practitioners, and hope the members of the Association will not be inclined to accept such conclusions as a final settlement of the question, but carefully investigate every case of disease of the eyes and the ears, and neuralgias of the head and face, in relation to the influence of pulpless and diseased teeth in producing such conditions, and instead of advising the immediate extraction of the suspected teeth, the patient be placed in the hands of a skillful dentist for appropriate treatment

If such practices could become general we should not be confronted with the statement, that as a result of the practice of dentists in treating pulpless teeth,

[1] Medical Record Vol xxvi page 525

"nervous diseases about the head were becoming alarmingly common" If the principles which underlie the practice of dentistry could be better understood by the general practitioner, there would be fewer people in the world with endentulous jaws, and consequently more people with robust digestions, for it is a lamentable fact that with many the value of the teeth in promoting the general health is greatly underestimated, and patients are advised to submit to the extraction of teeth that could be successfully cured of disease and made useful for years The only way in which this end can be accomplished is through the medical colleges This Association a few years ago recognized scientific dentistry as a department or specialty of medicine by the organization of a separate Section This has done much already to stimulate the young men entering the ranks of dentistry to take a full medical education, and is resulting in a demand for broader and more comprehensive teaching in the dental schools, of the sciences upon which rational medicine and surgery are based What is most needed, however, at the present time, in view of the subject presented in this address, is that the medical colleges of our country should each institute a Professorship, or Lectureship, on dental surgery, through which all future graduates shall receive at least a theoretical knowledge of dental and oral diseases and their treatment The possession of such knowledge would place the general practitioners in position to correctly advise their patients with regard to the care and treatment of their teeth, be the means of preventing a great amount of suffering to their patients and annoyance to themselves from inability to correctly diagnose such diseases, as well as to check the wholesale destruction of organs so necessary to the preservation of the functions of digestion and a robust condition of health

Argyle Building, cor Michigan Ave and Jackson St

LECTURE ON SUBCUTANEOUS BLOOD-INJECTIONS, SALT WATER INFUSION, AND INTRAVENOUS TRANSFUSION[1]

BY PROF DR H VON ZIEMSSEN,
DIRECTOR OF THE MEDICAL CLINIC IN MUNICH

(*Concluded from page 39*)

The effect of simple addition of fluid after loss of blood, as in cholera, etc, has, according to observations made thus far, been very considerable, and we must therefore notice this important fact Hitherto transfusion has been used in by far the greater number of cases of severe hæmorrhage which threatened life It was assumed that death from hæmorrhage was due to the loss of the carriers of oxygen, and on this account transfusion was done But in place of this *physiological* reason for hæmorrhagic death, Goltz has now brought forth the *physical* reason, "the emptying of the pump works" (das Leergehen des Pumpwerkes), in which he teaches that the heart can only set the blood vessels in motion by a certain degree of tension in the vascular system Hence it is deficiency of fluid which causes death Accordingly, Kronecker and Sander showed by experiments on animals that death from hæmorrhage could be prevented by the timely transfusion of salt solution, and Schwarz and others showed that the same was true in man in threatened death from hæmorrhage Since then salt water transfusion has come generally into use, and has been much used by surgeons and gynecologists This is only another illustration of how much practical therapeutics is indebted to physiology

But there is one thing that, from Maydl's and Schramm's experiments, must not not be overlooked hæmorrhage may be such that transfusion may be demanded to prevent death Transfusion of salt solution may delay death, but cannot prevent it Besides the diminution of the amount of blood, we must also consider the supply of oxygen carriers, and in all cases in which salt water transfusion is made to prevent death from hæmorrhage, it is advisable to follow it with transfusion of blood as soon as the alarming symptoms of threatened death are past In these cases, also, subcutaneous blood injections, on account of their safety and ease, are always to be preferred to intravenous transfusion

In salt water transfusion in cholera the case is, of course, different Here it is first of all necessary to keep the blood in circulation, to keep it in rapid motion, while the lost serum is being replaced That subcutaneous injections fulfil these indications much more completely than intravenous transfusion is already sufficiently shown

Determinations of hæmoglobin have so much the greater value, it seems to me, because they give some explanation of the question, how subcutaneous blood injections act in regard to the amount of hæmoglobin on the addition of indifferent fluids In order to solve this question, salt solutions and then defibrinated homogeneous blood were injected into various anæmic persons I may give two instructive cases in the first only small quantities of salt solution and blood were injected, in the second considerable quantities of each were injected

Marie S, æt 24 Chlorosis of high grade, moderate oligocythæmia, considerable oligochromæmia
Nov 5, 5 30 p m Corpuscles 2,612,500 in ccm, hæmoglobin 24 88 p c
Nov 6 5 30 p m, hæmoglobin 25 59 p c
Nov 16, 5 30 p m, hæmoglobin 26 35 p c
Nov 17, 10 30 a m, hæmoglobin 26 35 p c
Nov 19, 10 15 a m, hæmoglobin 26 42 p c
Nov 19, 10 30 a m, injection (subcut) 100 ccm of 0 75 per cent salt solution
Nov 20, 6 p m, hæmoglobin 25 29 p c
Nov 21, 6 p m, hæmoglobin 26 35 p c
Nov 23, 7 p m, hæmoglobin 26 35 p c
Nov 25, 10 30 a m, hæmoglobin 25 7 p c
Nov 25, 11 a m, injection 50 ccm defibrinated blood
Nov 26, 5 p m, hæmoglobin 30 81 p c

Notwithstanding the small amounts of the fluids injected, the difference between the action of the salt solution and of the blood injection is very apparent After the infusion of 100 ccm of salt solution the hæmoglobin fell 1 13 per cent, and did not entirely reach its former height in the next five days After the blood injection it rose 5 10 per cent, and then gradually went down in the next few days

[1] Translated, by permission of author and publishers, from advance sheets, by Wm G Eggleston M D, of Chicago

Still more instructive is the next case, in which observations were made during a number of weeks, and determinations made of the hæmoglobin, number of corpuscles, and proportion of white to red corpuscles

Anna G, æt 16, was overworked in the past few months and became very weak, entered hospital on November 18 Father living and healthy, mother dead, but patient does not know of what disease Patient has had no illness other than scarlatina Anæmia of high grade, muscular system weakly developed, has never menstruated No organic disease, appetite good, weight 77 26 lbs Ordered complete rest in bed, nourishing diet

Nov 19, hæmoglobin 37 75 p c, corpuscles 2,443,000, white to red 1 122

Nov 22, 11 a m, Hb 35 91 p c, corpuscles 2,825,000, white to red 1 282

Nov 22, 11 30 a m, subcutaneous injection 250 ccm 0 7 p c salt solution

Nov 22, 4 p m, Hb 28 63 p c, corpuscles 2,835,000, white to red 1 189

Nov 22, evening, no pain at site of injection, no rise of temp Feels much better, good appetite

Nov 23, feels well generally, non febrile, thigh slightly sensitive to pressure Hb 31 66 p c., corpuscles 3,005,000, white to red 1 207

Nov 25, Hb 33 99 p c, corpuscles 3,480,000, white to red 1 348

Nov 28, 11 a m, Hb 39 08, corpuscles 3,650,000, white to red 1 329

Nov 28, 11 30 a m, injection 175 ccm defibrinated human blood in both thighs under chloroform

Nov 28, 4 p m, Hb 40 85 p c, corpuscles 3,707,500, white to red 1 289 No pain, no elevation of temperature

Nov 29, slight rise of temp, thigh painful on pressure Hb 41 8 p c, corpuscles 3,682,500, white to red 1 324

Nov 30, temp between 100 4° and 102° Hb 41 68 p c., corpuscles 3,720,000, white to red 1 268

Dec 2, temp 98 9°-100.5° Hb 40 74 p c

Dec 3, no fever, feels well generally Hb 40 85 p c., corpuscles 3,757,500, white to red 1 331

Dec 4, no fever Hb 41 21 p c., corpuscles 3,850,000, white to red 1 302

Dec 6, 10 a m, Hb 36 41 p c, corpuscles 3,762,500, white to red 1 239

Dec 6, 11 30 a m, injection 350 ccm defibrinated blood in one leg and both thighs

Dec 6 3 p m, temp 100 4° Normal after 4 p m

Dec 6, 5 p m, Hb 41 93 p c, corpuscles 3,720,500, white to red 1 176

Dec 7, appetite smaller Morning temp 98 6°, evening to 100 7° Legs very sensitive to pressure, urine small (590 ccm, sp gr 1025), large sediment, which consists of urate of soda and uric acid crystals, no blood, no albumin Hb 55 08 p c, corpuscles 3,667,500, white to red 1 283

Dec 8, appetite small Morning temp normal, evening 101 1° Hb 43 18 p c, corpuscles 3,742,500, white to red 1 316

Dec 9, appetite good Thigh less sensitive to pressure Morning temp normal, evening 101 3° Hb 47 94 p c, corpuscles 4,035,000, white to red 1 322

Dec 10, feels very well Color of skin and mucous membrane much improved Evening temp 101 1° Hb 44 32 p c, corpuscles 4,062 500, white to red 1 299

Dec 12, feels better, color much better Hb 43 6 p c, corpuscles 3,997,500, white to red 1 345

Dec. 13, Hb 44.58 p c, corpuscles 3,725,000, white to red 1 235

Dec 14, Hb 43 29 p c, corpuscles 4,312,506, white to red 1 308

Dec 15, Hb 48,53 p c, corpuscles 4,292,500 white to red 1 346

Dec 16, Hb 48 84 p c, corpuscles 4,257,500, white to red 1 314

Dec 17, Hb 50 08 p c, corpuscles 4,295,000, white to red 1 291

Dec 18, Hb 50 4 p c, corpuscles 4,200,000, white to red 1 321

Dec 20, Hb 49 92 p c, corpuscles 4,302,500, white to red 1 340

Dec 20, 12 30 a m, injection 75 ccm defibrinated human blood

Dec 21, 1 m, Hb 88 65 p c, corpuscles 4,450,500, white to red 1 262

Dec 21, p m, Hb 47 89 p c

Dec 22, Hb 67 05 p c, corpuscles 4,472,500, white to red 1 318

Dec 23, Hb 69 14 p c, corpuscles 4,420,000, white to red 1 295

Dec 24, Hb 68 26 p c, corpuscles 4,500,500, white to red 1 287

Dec 26, Hb 67 4 p c, corpuscles 4,555,000, white to red 1 319

Dec 27, Hb 68 84 p c, corpuscles 4,757,500, white to red 1 388

Dec 28, Hb 76 71 p c, corpuscles 4,740,000, white to red 1 314

Dec 29, Hb 73 99 p c, corpuscles 4,612,500, white to red 1 347

Dec 30, Hb 69 74 p c, corpuscles 4,747,500, white to red 1 363

It is seen from this case that the number of corpuscles and the percentage of hæmoglobin do not bear any constant relation to each other From the tabulated statement the difference in the amount of hæmoglobin after saltwater injection and blood injection is apparent As in the case of Marie S, we see in this case that, a few hours after the injection of the salt solution (250 ccm), the hæmoglobin sank 7 28 per cent, and that this difference was again made up within four days The number of red discs, on the other hand, seemed somewhat increased, and the number of white cells proportionately increased Meanwhile, nourishing food and rest in bed also had its influence The increase of hæmoglobin after each blood injection, as opposed to the decrease after the salt-water injection, is very striking, but not so much the increase of corpuscles, at least not after large injections, in which a considerable number of cells in the body certainly died It is possible, moreover, that the quality of the blood injected in this case played a peculiar part, and that the corpuscles from an old person—the blood of the first and second injections came from an apoplectic person 60 years old—are not so suitable for transplantation as those of a younger person—third injection That the capacity of the red corpuscles for transplantation is not the same in all persons is shown in the following case, because the patient was injected with the blood which remained after the third injection in the case of Anna G, and because here the number of red corpuscles showed a corresponding material increase

Sophie G, æt 19 Primary oligochromæmia and oligocythæmia, otherwise a healthy and strongly developed person

Dec 18, Hb 45 54 p c, corpuscles 3,100,000, white to red 1 253

Dec 20, Hb 45 66 p c, corpuscles 3,002,500, white to red 1 284

Dec 20, 12 30 p m, injection of 175 ccm defibrinated human blood

Dec 21, 8 a m, Hb 55 31 p c, corpuscles 3,637,500, white to red 1 301

Dec 22, a m, Hb 55 65 p c, corpuscles 4,027,500, white to red 1 336

Dec 23, a m, Hb 54 12 p c, corpuscles 3,785,000, white to red 1 323

Dec 24, Hb 53 97 p c, corpuscles 3,740,000, white to red 1 294

Dec 26, Hb 52 04 p c, corpuscles 3,815,000, white to red 1 257

Dec 27, IIb, 48 53 p c , corpuscles 3,762,500 , white to red 1 244
Dec 28, IIb 50 008 p c , corpuscles 3,820,000 , white to red 1 323
Dec 29, IIb 49 3 p c , corpuscles 3,830,800 , white to red 1 281
Dec 29, Hb 51 05 p c

In this case the action of the blood injection appears in a very satisfactory light, and as the result of the third injection in the case of Anna G was equally satisfactory, it seems that the blood of the well nourished young man (who was "full blooded" and somewhat hypochondriacal), was especially suitable for transplantation

In the case of Anna G it was very clearly seen that in repeated injections of blood in the same region (thigh), with each injection the subcutaneous cellular tissue became more capable of absorption, so that the injection as well as the dissipation of the blood became easier The case also teaches to what degree renewal of the blood can be carried In this weak 16 year old girl, weighing 77 lbs , the blood weighed approximately 7 7 lbs In this case 350 ccm of blood, more than one tenth of the whole amount in the body, were injected at one time, and in three operations 600 ccm of blood, almost one fifth of the whole amount, were added The case still further teaches that good results do not depend upon the quantity injected, but that even such small quantities as 75 or 175 ccm may give excellent results, while they have the advantage of causing no reaction (with the exception of unavoidable pains at the seat of injection), and no fever Furthermore, the sites of injection are not painful except to direct pressure, if ice-bags be placed over the thigh for the first few days after the injections

As a matter of fact salt-water injections present fewer difficulties than blood injections, because the dissipation and absorption of the water in the connective tissue takes place with greater ease and rapidity For this operation the site of injection need not be changed so often, but 3 or 4 syringefuls (75–100 ccm) may be placed in one spot And the pain of the massage is so much less severe than that after blood injections that chloroform narcosis may be dispensed with if the patient be not very sensitive

The possibility of introducing large quantities of water subcutaneously was shown in 1884 by Cantani and his colleagues in Milan, Naples and Genoa during the cholera epidemic These authors carried out the idea of antagonizing the loss of water and its effect on the circulation by infusing water into the subcutaneous cellular tissue Cantani's pupils generally infused 1,000–1,500 ccm of alkaline salt water in the ileo-costal region by means of an irrigator The solution consisted of soda 3, distilled water 1,000 parts, and was injected at a temperature of 39° C With very low temperature of the extremities the fluid was injected at 40° C In a typhoid stage with very marked reaction 500–600 ccm were injected at a temperature of only 37 5° or 38° C , and with very high fever at a temperature of 37° C Samuels' recommendation that the injections be made in the neck should not be carried out, as the cases in which this was done died of œdema glottidis Massage was not made over the site of injection, and the large quantities of water were left to spontaneous absorption The results of this method of treatment were generally satisfactory, though very different, according to the nature of the individual case, the stage of the disease and of the epidemic Further investigations on this subject are necessary, especially as there is a possibility that drugs and alcohol, which cannot be absorbed by the stomach and intestines, might be mixed with the water to be injected

The apparatus needed for salt water injections is not complicated A good glass syringe with a long, not too narrow needle, and holding from 25 to 50 ccm , is sufficient for salt-water as for blood injections, and in time of cholera can be carried in the pocket, as well as the necessary quantities of sodium chloride (7 5 grams to 1 litre), which may be used without carbonate of soda All that is then necessary is good thoroughly boiled water, and the injection can be made without difficulty or loss of time

Just as useful is the hypodermatic salt water injection in dangerous hæmorrhage, or severe acute anæmia from other causes But in all such cases in which it was simply a matter of choice, I would certainly give preference to injections of blood, for the reasons already stated But in many cases a blood donor is not at hand, and we cannot always get a sufficient quantity of blood, and in dangerous cases it is always better to fulfil the first indication and feed the heart-pump After this blood injection may be made, once or oftener as necessary Nor is there any objection, after severe hæmorrhage, to follow up the blood injection immediately by one of salt-water, the quantity of the latter being proportioned to the amount of blood lost And if there be danger in delay there need be no hesitation in using simple boiled water for the injection, as this can always be had Every physician, and especially every obstetrician, should carry a large syringe for subcutaneous injections in his instrument case During and after labor the most acute hæmorrhages occur, and it is impossible to supply new fluid to the system more quickly and more simply than by the hypodermatic method

This procedure is very much simplified by the filtering properties of the subcutaneous cellular tissue, which render filtering of the water unnecessary If a small foreign body is in the water it will be arrested by the connective tissue, or by the lymphatics, and kept out of the circulation, whilst in intravenous injections everything in the water goes into the blood In the necessity and haste after severe hæmorrhage this is a very important matter If you had a severe case of post partum hæmorrhage in the country at night, would you wait to get distilled water and chemically pure salt from the apothecary in town, or for the assistants and necessary apparatus for intravenous transfusion? But if you know that you can inject the necessary quantity of boiled water, and thus obviate the immediate danger to life, you will be much better equipped for such emergencies And if you find it necessary afterwards to make blood injections, and it is often necessary after severe hæmorrhage, you have time enough to prepare everything, and especially to find a blood donor The same is

true in cases of dangerous hæmorrhage from the lungs, stomach and intestines Experience will show how far reaching is the effect of salt water injections in such cases It must be remembered, however, that injections of blood can probably never entirely compensate for loss in large hæmorrhage, and that they only avert immediate danger

Under what circumstances subcutaneous blood injections would be efficient in gas poisoning (with carbonic oxide, chloroform, sulphuretted hydrogen) after sufficient depletion, I cannot say, as I have not had any experience thus far At all events the subcutaneous injections offer as many chances as intravenous transfusion if a previous venesection has been made We know that many poisonous gases, especially carbonic dioxide, taken into the blood through the lungs, take possession of the hæmoglobin of the corpuscles, and render them incapable of taking up new oxygen As shown by Kuhne, Landois and others, in these cases the supply of fresh blood has a better effect when a corresponding amount of poisoned blood has been taken from the system than when this is not done But in all cases the *quantity* of new blood supplied is of the greatest importance, the more functionating oxygen carriers added the greater is the guarantee that life will be saved Now, the quantity of blood supplied can be much more easily regulated and increased by subcutaneous injections than by intravenous transfusion, as the injections can be repeated or discontinued according to the exigencies of the case Certainly the results of intravenous transfusion thus far in gas poisoning and other similar cases are not very favorable Heineke has collected 23 cases (mostly coal-gas poisoning) of which 14 were unfavorable in spite of transfusion, 8 favorable, and 1 uncertain But the experiments should not be discontinued, especially since we have the hypodermatic method

Transfusion of salt water has very recently come into use in poisoning Favorable results have been obtained from experiments on animals and men so far as can be seen, and give reason to think either that the addition of fluid to the blood may act favorably either by the dilution of the blood or by exciting the renal secretion Kocher transfused 200 grams of blood without result in two cases of iodoform poisoning, and then saved the patient by transfusing 500 ccm of salt water This result is certainly very good, but its value as proof is lessened by the previous transfusion of blood But in individual cases it should be remembered, in determining the selection of blood or salt water, that in those poisons which either deprive the corpuscles of their oxygen (carbonic oxide, etc) or act upon them as direct solvents and so cause hæmoglobinæmia and ferment intoxication (potassium chlorate, chloral phosphorus) transfusion of blood must be unhesitatingly given the preference over salt water

The action of blood infusion in acute infectious diseases has been but little studied Most of the experiments and observations have been in regard to septicæmia, and the results thus far have been very unsatisfactory, abatement of the infectious condition was probably obtained, but no permanent improvement, and the conclusion seemed almost inevitable that, in septicæmia at least, the addition of new blood was only pouring oil on fire, as the ferment thus received new material to work on, and the fire kindled anew This may be true of septicæmia, but I may doubt if this opinion is just for all infectious diseases and for all stages of infection For the present, at least, when according to our knowledge of the cyclical course of the infectious condition and the limited life duration of the germ ferment in individual infectious diseases, we may assume the cessation of activity of the microorganisms, and transfusion may perhaps be really useful under certain circumstances and in certain conditions (heart weakness in typhoid, etc) In cholera, at least, the necessity of infusion against the consequences of loss of water from the system has been rendered probable by the observations of the Italian physicians The future will show what is to be expected from the addition of new blood in the other acute infectious diseases In spite of the opinion that infusion of blood only adds new material to the infectious process our experiments should not be discontinued—as is shown by the change of opinion within a century regarding the diet of fever patients Theoretical ideas may sometimes be a serious hindrance to therapeutic progress

More trustworthy is transfusion in chronic infectious diseases, in the dyscrasiæ and anæmic conditions Our blood injections in chronic tuberculosis had a striking but transitory effect It is not impossible that by oft repeated addition of new blood to the oligæmic organism there may be a more permanent improvement in such hopeless cases, especially if there be no fever It is certainly worthy of trial In regard to scorbutus I have had one case, of a man, in which the disease was of the most severe type, and a fatal issue was supposed to be almost certain The usual antiscorbutic treatment and diet were carried out for 6 days without noticeable good result; and by an injection of 50 ccm of blood the hæmoglobin was raised in one day from 28 7 per cent to 33 94 per cent Three days later, when hæmoglobin had fallen to 32 2 per cent, 50 ccm of blood were again injected, and on the next day the hæmoglobin was 34 55 per cent While the increase in the hæmoglobin may seem small for the amount of blood injected (100 ccm), the improvement in the color, expression and strength of this patient was very striking There can be no question of the effect of good feeding in this case, as the result followed immediately upon the injection, and previous to this the most nourishing diet had accomplished nothing in 6 days The sudden change from a very grave condition to one of convalescence is to be ascribed to the blood injections alone

The chronic anæmias and dyshæmias, with their numerous functional troubles have been thus far but comparatively seldom submitted to the methods of blood renewal, at most the conditions thus treated have been leukæmia, pseudoleukæmia and pernicious anæmia The experiences in these severe forms of disease of the blood forming organs are certainly not very encouraging, though some cases have been very much improved

Pernicious anæmia is, of all others, the disease for often repeated transfusions This was impressed upon me by the case of a man, 45 years old He was in such a condition of anæmia that he was confined to his bed, becoming syncopal on rising Prof Heineke and I transfused 180 ccm of blood This was followed by a severe rigor and very high temperature, but from that time the appetite, sleep and strength rapidly improved, and the patient passed into a condition of tolerable existence He died two years later of recurrence of the disease, due to over-tax of strength by traveling

Pernicious anæmia would be a very favorable condition for repeated large hypodermic injections, such as were made in the cases of R C and Anna G In our ignorance of the nature of this form of disease, in the lack of sharper etiological indications, and in the face of the notorious inactivity of all dietetic and therapeutic measures, there is but little doubt, as in leukæmia and pseudoleukæmia, that the addition of new functionating blood must be favorable to the organism, and that this improvement need not always be merely transitory, but may perhaps be permanent, in so far that the anomalies in the functions of the blood forming organs, especially in the medullary canals of bones, possibly kept up by the anomalous condition of the blood, may be removed by the addition of new blood As analogous cases may be cited the favorable action of our repeated blood-injections in protracted severe chlorosis, which did not tolerate iron and were not improved by the most careful diet I am convinced that in these cases the hæmoglobin is not merely temporarily improved, but a cure may be obtained, possibly by action of the blood in a manner unknown to us

Most of the cases in which I have made subcutaneous injections were cases of severe chlorosis and chronic anæmia from different causes These cases are comparatively frequent, and remain under observation for some time, and it is very necessary to study the action of this procedure in female cases on account of the great frequency of such anomalies of the blood in women

Heineke, in his admirable work on "Bleeding, Transfusion, and Infusion," (Deutsche Chirurgie, Lief 18, 1885,) expresses the opinion that, in man at least, the greater part of the blood injected subcutaneously first disappears from the cellular tissue, and the blood cells break down and their coloring matter is changed into pigment scales Every one of my anatomical examinations of the site of injection, which I made one or two days after the injection, in phthisical and other patients, showed me that besides a slight hæmorrhagic imbibition of the cellular tissue there was no trace of the injection It may be true, as Heineke and Schaffer state, that in experiments on animals the greater part of the corpuscles lie (faded) in the tissue after several days, but in man, at least so far as my researches show, the statement is incorrect The enormous strengthening effect of an energetic massage is undervalued by Heineke, and the value of experiments on animals, for the solution of this question, over-rated as by Ehrlich If Heineke's opinion be correct would not an injection of 275 ccm of blood at one sitting cause hæmoglobinæmia and ferment intoxication, or at least fever and hæmoglobinuria? But in this case (R C[1]) there was no reaction at all, and to me this is better proof than everything else that the injected blood passed directly into the circulation without undergoing important histologico chemical changes At all events, experiments on guinea-pigs, in which energetic massage is impossible, do not weaken the positive and incontrovertible results of my cases

ORIGINAL ARTICLES.

TREATMENT OF FOUR CASES OF ACUTE TRAUMATIC TETANUS

Read in the Section on Surgery and Anatomy, at the Thirty Eighth Annual Meeting of the American Medical Association, June 7, 1887

BY R. C McCHORD, M D,

OF LEBANON, KY

In presenting for your consideration four cases of acute traumatic tetanus that have come under my observation and treatment, I feel that they are cases of no little interest, in view of the fact that three of the four cases recovered In searching the literature of tetanus, we are confronted with the overwhelming and prevalent idea that acute traumatic tetanus is incurable Dr Gross, in summing up his ideas as to the prognosis of traumatic tetanus, says "In an experience of forty years, I have seen but three cases where the patient escaped with his life, and then only after a protracted and painful struggle" M Nicaire, author of the article on "Injuries and Diseases of Nerves," in the "International Encyclopædia of Surgery," in speaking of the influence of treatment upon the termination of tetanus, says "Must we maintain the absolute distinction into two forms, the one acute, inevitably mortal, and the other chronic, which recovers by itself, and in which the sole part of therapeutists is to prevent death by asphyxia and give the patient ease? I believe it more correct to say, with Richolat, setting aside the overwhelming forms, which seem beyond the resources of art, that the acute form has never been directly cured"

Did time permit, I might go on and cite many similar opinions going to show how little faith the profession at large have in the therapeutic medication of tetanus My experience, though in a small way, has taught me to differ from the authorities, how wisely the difference of opinion may have been formed, from experience, I will leave you to judge We are all too much accustomed to folding our arms in the presence of these so called incurable diseases

Case 1—On June 23, 1878, H C, a stout negro man, aged 21, presented himself with a pistol ball under the skin of dorsal surface of index finger of left hand He stated that the night previous he was cleaning an old Colt's revolver, and by some means dropped the cylinder on the hearth, causing its dis-

[1] THE JOURNAL, July 9)

charge The ball entered the palmar surface of index finger, slightly touched the bone, and lodged as described on dorsal surface, without fracturing the bone Why it did not pass on out I cannot explain, except it was probably due to the defective or small charge of powder I made an incision and extracted the ball, dressed the finger, and saw no more of H C until five days later, when I was hurriedly sent for, with the message that he was having spasms On my arrival I found him in bed perfectly rigid with his head thrown backwards and the weight of body resting for the most part on back of head and heels The muscles of back and abdomen were rigidly contracted, as were also those of the extremities and jaws The wound on finger presented an unhealthy appearance, discharging a thin sanious fluid, and manifesting no disposition to heal, the whole hand being very much swollen Seeing that there was no disposition to a relaxation of the spasm, I began the administration of chloroform and continued it to its full effect, with the result of relaxing the rigidity of the muscles As soon as the spasm of muscles was controlled, I dissolved about 30 grains of bromide of potash in water, and waited for the effect of the chloroform to pass off sufficiently for him to swallow I forced him to swallow the potash, when he again soon became rigid as before The chloroform was again brought into use, with like result I sat by him for several hours, keeping him under the influence of the chloroform, for without it he was rigid I gave him about 90 grains of bromide of potash in about two hours, the relaxing effect of the chloroform enabling me to administer it

Under the influence of the chloroform and bromide of potash, after several hours, the opisthotonos and general tetanic spasms were to a slight extent controlled I left him in the hands of his friends for the night, after instructing them to administer the bromide of potash in 30 gr doses every two hours, and to keep the tetanic spasms under control with the chloroform I saw him the next morning and, to my surprise, he was some better, the muscular rigidity being relaxed His friends had carried out my instructions explicitly, and the amount of chloroform they had used told plainly how hard the tetanic spasms had been to keep under control

In order to test the full effects of the bromide of potash, I let him out from under the influence of the chloroform, but on attempting to give the bromide of potash, he became rigid, and I was forced to again resort to the chloroform before he could swallow I then began to give the bromide of potash almost without regard to quantity, all he could well swallow By evening the tetanic spasms were about under control, and he could take the potash without the aid of chloroform He was also able to swallow some fluid nourishment The same course of treatment was followed out during the second night, the chloroform rarely being necessarily used On the morning of the third day he was completely relaxed From this time on for ten days he was kept fully under the influence of the bromide, only once having to resort to the use of chloroform, and then it was only when the bromide of potash had been held up to test its effect His hand was dressed, for the most part, with a flaxseed poultice, and nourishment administered in the fluid form at regular intervals He made a complete recovery, without any unpleasant effects, so far as I could determine, from the heavy administration of the bromide

Case 2 —In the summer of 1879 T R, a negro boy aged about 10 years, stout and well nourished, trod on a rusty nail while at play, and about four or five days afterwards I was asked to see him for what was supposed to be sore throat When I saw him first nothing was said about the injury to foot from nail I found the muscles of jaws somewhat contracted, and on his attempting to open his mouth he complained of a cramping at angle of jaws and some pain I made a superficial examination and prescribed some domestic remedy The following day I was asked to see him again, as he was acting a little peculiar and could not open his mouth On attempting to force his mouth open, he complained of great pain and a sense of impending suffocation, which in a moment was accompanied by a look of contentment and then the sardonic laugh I soon recognized the trouble, and on inquiry was told that about six days previous he had trod on a rusty nail, and though the wound was painful at the time, yet it had never suppurated and was now healed over On examination I discovered, immediately under the instep and a little to the outer surface, a slight abrasion of the skin covered over by a slight scab On removing this I found the wound had not healed, but presented an unhealthy appearance While examining the wound his jaws became firmly closed, the muscles of neck contracted, and for a moment he was almost rigid I ordered bromide of potash in 10 gr doses every hour, and a poultice to the foot At my morning visit I was told that he had been able to take but little of the potash on account of the difficulty in swallowing By this time the tetanic spasms had become frequent and more prolonged, and it was impossible for him to swallow but very little fluid at a time I began the administration of chloroform as in *Case 1*, gave the bromide of potash while the muscles were relaxed by chloroform In this way he took the potash at intervals of one or two hours during the night The next morning the frequency and severity of the tetanic spasms were somewhat less, and he could swallow fluids without producing much spasm, though occasionally during the day and following night chloroform had to be administered to keep them under control On the morning of the third day the spasms were under control and the chloroform was no longer needed The bromide of potash was kept up at intervals of two hours for the next three days, during which time he took liquid nourishment with but little difficulty, the spasms gradually growing less frequent and severe, until finally they ceased, and on the morning of the sixth day from time of commencing the treatment he was in fine condition, free from spasm and but little rigidity of muscles Although I considered him almost out of danger, yet I ordered the potash continued Soon after my morning visit on the sixth day, I left town and was gone all day, and on my return late in the afternoon, I found a message awaiting me to go to

see the boy immediately On my arrival at the house I was surprised to find my patient dying He died soon afterwards On inquiry I learned from the mother that, soon after my morning visit, she discovered that the powders of bromide of potash were out She sent to my office to know whether she must have the box refilled with the powder or not, and as I was absent, instead of having it filled and continuing the medicine as directed, she concluded to wait until my return, with the result as stated

Case 3—April 15, 1881, I saw, with Dr W R Ragsdale, L B, a native of Germany, but of Jewish birth He was 17 years old, general physical condition delicate He had but a few weeks previous arrived in this country, and could speak but a few words of English Four or five days previous to my first visit he had accidentally pierced his left hand through with a paper-file, just external to the metacarpal bone of little finger The wound had not healed, but presented an unhealthy appearance, quite tender to the touch He presented well marked trismus at intervals, which gradually progressed until opisthotonus was well marked He was naturally very obstinate, and not being able either to speak or understand English, it was with the greatest difficulty that we could get him to take the medicine prescribed The wound was laid open and dressed with a poultice, which seemed to give him some ease, and, we flattered ourselves, some temporary relief to the tetanic spasm By direction of L B's uncle, who visited him, I was requested to remain in the case with Dr R, so that one or the other could be in constant attendance He complained of much pain at site of wound, for the relief of which hypodermics of morphine were given The tetanic spasms were controlled at first by chloroform Bromide of potash was administered in 20 and 30 grain doses every two hours For several days, while he took the potash without opposition, the spasms became less severe On account of his extreme repugnance to chloroform and determination not to take any more, hydrate of chloral was given in 20 grain doses every three or four hours as a substitute Sometimes it was administered by the mouth and at other times by rectum, as the caprices of our patient would allow It served its purpose well When we could get him to take the potash regularly the chloral was not required, only to produce sleep For nearly four weeks this patient was kept under the influence of bromide of potash, and I would say for three weeks he averaged 20 grains of bromide of potash every two hours This was found necessary to control the tetanic spasms Sometimes when his opposition to the potash was very great, we were compelled to forcibly hold him and administer a dose of chloral per rectum and wait until he was under its influence before he would take the bromide During the first two weeks chloral was given sometimes as often as four or five times in the twenty-four hours, to quiet excitement and produce sleep During the four weeks he was under treatment, he was systematically nourished with beef essence, milk, etc

When all symptoms of tetanus had passed away, we noticed that what appeared in this patient to be obstinacy at first, was now a true mania, it requiring the combined efforts of four or five men to restrain him This latter condition gradually subsided, and he was finally sent to the asylum, and is now there a hopeless imbecile

Case 4—On August 25, 1886, I saw Ben B, white, aged 8 years, stout and healthy He had just received a badly lacerated and contused wound of the fingers of the right hand, by its being caught in a forty knife cutting box The ring finger was cut through the bone in two places, the middle finger was cut through in three places, and in each place the finger only hung by the skin and a few tendons The index finger was lacerated, contused and broken, involving its second and third phalanx There was so little vitality in the injured portion of this finger that it was removed on the 29th, at its middle joint, four days after injury, simply by twisting it off with the forceps As there was not sufficient flesh to cover the bone, it was deemed best not to cut off the protruding bone, but leave it to be covered over by granulation After this all the wounds progressed quite favorably, those of the other two fingers, which I had brought together, sewed up and put on splints, healing to a great extent by first intention On September 6, twelve days after injury, my little patient visited me at my office to have his hand dressed, as usual The granulations had by this time covered over the end of bone and were quite luxuriant In directing a warm spray of carbolic acid on the granulating surface, for the purpose of cleansing the same, I noticed a peculiar expression of countenance and a sudden contraction of the flexor tendons of the arm He complained of slight pain at site of wound, and a stiffness of muscle of jaw, together with constricted feeling in throat and chest This lasted only a moment, accompanied by a look of contentment, or mild form of sardonic laugh I immediately recognized the trouble as being trismus, and on examining his pulse, found them quite frequent He was sent home and put to bed, and bromide of potash ordered in five grain doses every two hours

I informed his father of what I feared would be developed, and promised to call in the afternoon At my afternoon visit I found my little patient in bed with his jaws stiff, and at intervals of a few minutes they were locked tight, and a general rigidity of muscles of back and abdomen occurred I immediately advised amputation of the finger at its metacarpo-phalangeal joint His parents objected, and asked a postponement until next morning, which I very reluctantly consented to At eleven o'clock that night the father informed me that the tetanic spasms were getting more frequent and of greater severity, and asked me to see him On my arrival I found an increase both in frequency and severity of the tetanic spasms With the consent of the parents, I amputated the finger at its metacarpo-phalangeal articulation, dressed the wound, gave a hypodermic of morphine, and ordered bromide of potash in five grain doses every two hours

On the following day the tetanic spasms were less severe and of not so frequent occurrence The

bromide of potash was continued as before, and hydrate of chloral given to produce sleep For the next two days the spasms were light, though easily excited by noise or movement of body

On the third day after amputation the wound was dressed and found to have healed about one half by first intention The other portion looked well By the evening of the third day the tetanic spasms had gradually grown more severe and opisthotonus was well marked The potash was increased to 10 grains every two hours, and hydrate of chloral in 5 grain doses given at intervals varying from three to four hours, according to the degree of excitement, etc From this time on he took 10 grains of bromide of potash every two hours for three weeks, night and day, when it was gradually reduced in dose and given at greater intervals for two weeks more During all this time hydrate of chloral was given in 5 grain doses either by mouth or rectum, when very much excited or sleep was desired I think he had an average of four or five doses of chloral in every twenty four hours This boy had beef tea, milk, and soft boiled eggs at regular intervals during the whole period of sickness He was discharged on October 1st, well, having been under treatment for tetanus since Sept 6th He made a perfect recovery without any impairment of mind whatever, and is to day as bright a little fellow as one would wish to see

To summarize The first case was treated with bromide of potash and chloroform, recovered The second case with bromide of potash and chloroform, and although the mildest of the four cases, died, I think simply from neglect to keep up the administration of potash The third case was treated with chloroform, bromide of potash, and chloral, recovered physically, but mentally a wreck, whether the latter was due to the potash, or chloral, or not, I am not prepared to say The fourth case was treated by amputation, bromide of potash, and chloral, with perfect recovery in every respect

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ESSENTIAL INDIVIDUAL HYGIENE OF A MUNICIPAL POLICE FORCE FOR THE PREVENTION OF PULMONARY DISEASES

BY GEORGE HOMAN, M D,

PROFESSOR OF HYGIENE ST LOUIS MEDICAL COLLEGE SECRETARY OF THE STATE BOARD OF HEALTH OF MISSOURI MEDICAL EXAMINER TO THE ST LOUIS POLICE DEPARTMENT

Read in the Section in State Medicine, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

The following remarks are not intended to cover the whole field of personal prophylaxis against diseases by members of a municipal police force, but only to direct attention to certain facts that appear to be well established, and which have been observed by me in the two years last past, during which time I have performed the duties of Medical Examiner to the Police Department of the City of St Louis The particular matter to the importance of which I desire to call attention, is that of pulmonary hygiene, if it may be so termed, to certain statistics collected by me in regard thereto, and their obvious bearing and indications in the direction of measures to lessen disability and loss of service from avoidable forms of pulmonary diseases

In the course of my service in connection with the department, it became my duty during the summer of 1885, to make a careful physical examination of all members of the police force of this city below the rank of captain, numbering at that time 482 men The examination was made by order of the Board of Police Commissioners, the purpose being to ascertain as nearly as possible the exact bodily condition of each member, and to determine the degree of physical soundness and efficiency possessed by every officer examined at that time Careful measurements of chest dimensions were made in every instance, and every symptom and circumstance denoting pulmonary integrity or infirmity was recorded and duly considered in the final classifications, as to physical standing and ability made when the work of examination was completed

The average mean girth of chest at the level of one inch above the nipples of all the men examined, was found to be something above thirty-eight inches, (38 '1375)—the extremes being the greatest possible degree of respiratory expansion and contraction of the thoracic cavity upon forced inhalation and expiration The measurements in every case were taken with a steel line with all clothing removed from the upper half of the body The average degree of expansibility of the chest was found to be 2 759 inches, this measurement indicating the degree of mobility or extent of free play of the chest walls As correlative facts of interest in this connection, it may be stated that the average individual stature was 5 8 ' 22, the weight 167 36 pounds, and the average waist girth 34 131 inches

Examination of the mortality record of the department, and of the morbility returns of the force, so far as they were ascertainable, showed that among the causes of police disability pulmonary affections hold a leading position, and it has been my desire to ascertain, if possible, if there is any determinable relation between these potent forms of mischief and tax upon vitality and efficiency, and the routine duties of individual members, and the discipline and code of management under which the department is operated

The daily routine duty required of a patrolman in this city is twelve hours' service out of the twenty-four, extending from 11 o'clock A M or P M as the case may be, the change from day work to night work, and *vice versa* being made every three months Aside from one hour's drill per week in the manual of arms during the winter months, no bodily or athletic exercise is required of a policeman other than that involved in patrolling the district assigned to him, with the incidental exertions needed on his part to maintain law and order therein, the result being that there is usually plentiful foot and leg exercise to the neglect of other highly important parts of the body

The standing force comprises in its members many veterans, some twenty-six of whom have seen more

than twenty years of police service in connection with this department These veteran members, while now invalided to a great extent and exempted from any but the lightest duties, no doubt represent the survival of the better physical element of a contingent recruited under rather lax regulations as concerns inspection and physical qualifications, and, indeed, it may be said that at no time have the regulations governing appointments to the force been very stringent, or the requirements in this respect exacting

The mingling of the physical statistics of the aged, invalided and veteran elements with those of the healthy, younger and more vigorous men tends, of course, to deteriorate the statistical effective standing of the force as a whole, but, while this is necessary in order to a correct representation of existing facts, it may be said in mitigation of the effect on the showing thus made that 277 members, or over 57 per cent of the total force, have seen less than ten years' service, and 152, or over 31 per cent have been members less than five years, the total of those who have seen ten years' service and more being 205

The numerical and physical composition of the force naturally fluctuates somewhat through deaths, dismissals, and resignations, about six recruits a month on an average having been added during the last two years

In endeavoring to determine the special influence, if any, of police life and duty upon the pulmonary organs and functions, I have carefully compared the ascertained data in this respect of the regular members of the force and those added from time to time to fill vacancies in the ranks The average age of the men at the time of the department examination was a little over 38 years, while the average age of recruits is 28 years

In making good the losses of the force it is the usage of the Board of Commissioners to appoint the applicants for a probationary period of six months if he be found qualified after rigid physical examination for such appointment, the department being given the benefit of any doubt that may exist in the mind of the examiner After the expiration of the probationary term he is eligible to appointment as a regular member of the force Not infrequently before such appointment he is ordered up for a second examination, and it has been in such cases that I have been most forcibly impressed with the influence of police life and regulations in inducing tendencies to pulmonary weakening, and foreshadowings of pulmonic default and danger

I have already stated the average girth of chest, and thoracic expansion of St Louis policemen The same measurements of 122 recruits show in respect to the first dimension a difference in favor of the latter of about one quarter of an inch—and the average chest expansion of the latter being 3 "395 to 2 "759 in the regular policeman The averaged mean girth of chest in the recruit is 38 "354 to 38 "1375 of the patrolman—a difference not strikingly great and of much less serious import in the sense in which the matter is being now considered than is the former, as a considerable gain in mean chest girth may be noted while the absolute breathing capacity of the chest cavity, and free play of its walls are diminished —the increased girth being due to extra costal causes, usually to overlying fat, and for this reason deductions from a mere increase of measurement around the chest must be deceptive as an indication of soundness of the lungs, the ascertained degree of normal expansibility constituting the only decisive test so far as measurement is concerned

Additions to the regular force are usually made from among men employed as laborers, mechanics, porters, teamsters, and like occupations in which the muscles of the arms and associated parts are brought into more or less constant vigorous exercise Upon assignment to police duty the accustomed symmetrical use of all the working muscles is lost as compared with previous occupation, walking being all that is required of the officer, and the hurtful effect of the change, after the lapse of a few months even, upon pulmonary expansibility and capacity is most marked In repeated instances applicants for appointment coming from occupations requiring all-around exercise, and in whom the respiratory apparatus was found to be of superior excellence as regards both free expansibility and normal breathing sounds, after six months police service the normal expansion had decreased from one half to one inch, or even more, and the comparative rigidity of the chest walls was accompanied by impaired or roughened vesicular murmur, with symptoms of circumscribed congestions, incipient catarrhs, and other signs of sluggish pulmonic circulation,—the girth of the chest being usually not sensibly changed

This condition was so uniformly present in those cases in which the subject had resorted to no gymnastic exercise to maintain the initial good condition of the chest, as to at once attract my attention, and the good results that have followed the employment of means to increase the capacity of the chest, to develop and strengthen the auxiliary muscles of respiration, and to favor the free play, suppleness, and expansibility of the chest walls have been equally manifest These results have appeared not only in a betterment of chest measure, but in the appearance and establishment of normal respiratory sounds, in increased freedom from coughs and colds, in improved general circulation, in appetite, digestion, nutrition and excretion—in a word there was a general exaltation of physical vigor and power that was consciously felt and enjoyed by the subject

In instances where the applicant fell short of the standard through pulmonary defect remediable in character, the counsel given by me to overcome the difficulty has been followed for some months with the constant result of improvement in wind, and deepening of respiratory capacity The means recommended to this end have been the systematic judicious use of hand weights, sand bags, clubs, and other devices for symmetrical physical exercise and development found in gymnasiums

From all the foregoing considerations my opinion is, that the omission from the department equipment of means for regular systematic chest and arm exercise, and the enforcement of their use as a necessary

part of routine duty in any police force on a service basis similar to the one in this city, indicates a point of vital weakness, and that such lack constitutes an unguarded avenue by which a host of physical evils assail the municipal defenders of life and property A fair degree of speed with good wind endurance is recognized as being necessary physical qualifications of the perfect officer, and these requisites can only be secured by appropriate gymnastic drill designed to exercise and harmoniously develop and preserve the entire body

It is my deliberate conviction, reached after a careful study of the records of two years, together with other material data, that, aside from the natural decline of chest elasticity which accompanies advancing years, there is a certain percentage of loss in this respect in the police force of this city that may be justly ascribed directly to general physical conditions incidental to the performance of duty under existing regulations, and I believe that this loss represents a definite and calculable proportion of the total impairment of service by sickness in the force Furthermore, I believe that the cause of this waste and loss in vitality, time, and effective employment, bears a constant and definite relation to defects and errors of long standing in the physical regulation of the department—that this wastage is largely avoidable, and that the shrinkage or impairment of chest capacity, due to faulty physical conditions in the constitution of the department, means so much loss in time and so much loss in money which might be saved by a modification of discipline and the introduction of simple means for the attainment of the desired end The money loss to an employer from a case of pneumonia or pleurisy in an employé may be computed, and the relative cost to the possible effective police total of all forms of preventable lung maladies may be closely reckoned, and the value of the results of preventive medicine, or pulmonary hygiene, be determined on a financial basis For if, by a practicable modification of existing regulations and adjustment of means to ends, an average increase in breathing capacity of say one half of an inch per man could be secured to the entire force, it is my judgment that the loss of time from pulmonary troubles would be decreased at least one third, while the gain in general vigor, morale, and physical power would be not less than fifty per cent , and, certainly, the money equivalent of this gain would represent many hundred dollars annually, not to speak of the decreased amount of physical suffering, the increased ability to perform duty, and the prolongation of years of effective service to the veterans of the force

It is but simple justice to say that the efforts of the present Board of Police Commissioners have been uniformly directed toward the achievement of reforms which would include the ends herein suggested—to the correction of organic faults in the department, and to elevating the standard of physical vigor and efficiency of the police force of this city

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EMBOLI—THE SEQUALÆ OF TWO CASES OF LABOR

BY W L SCHENCK, M D,
OF OSAGE CITY, KANSAS

Recognizing the advantages that arise from an interchange of opinions upon the etiological and pathological conditions and therapeutic results observed in our daily routine of practice, I take pleasure in reporting the following cases

On Sept 17, 1886, I was called to see Mrs C , æt 25, in consultation with Dr Artz She was a delicate little woman, but with fair general health, of English birth, and for five years a resident of Kansas She was living on a rolling prairie, half a mile from any other house, with all the surroundings healthful, excepting that the house was over crowded with occupants She and her husband occupied a good sized and well ventilated room, with a south and east front, which, however, was over crowded with various articles of furniture She had been delivered five days before of her first child The labor, though tedious, exhausting and followed by more than ordinary hæmorrhage, was in all respects normal The lochia was abundant, and there was no unusual tenderness in the genital organs She had slight fever and cough, with pain and dulness in the right side of the chest There was great anxiety and a nervousness that bordered on hysteria There had been no exposure and no imprudence in her management, unless it be considered imprudent to neglect some of the impossible directions laid down by some distinguished gynecologists

On Sept 22, I was called again to see Mrs C , and learned that after my former visit she had promptly developed lobar pneumonia of an asthenic type, involving about half the right lung

Oct 20 Was requested to take charge of the case, Dr A being sick The pulmonary inflammation had subsided, though there remained considerable cough and expectoration From continued recumbency she had developed serious and somewhat peculiar bed sores There was a slight abrasion about the middle of either nates, beneath and about which, extending down to the muscles and across the lower end of the sacrum, the tissues were dead and sloughing There was tenderness and enlargement of the crural vessels of the left leg, some pain in the popliteal space, and marked phlegmasia of the calf This condition was first noticed two days before

Nov 4 Though convalescing nicely from her former troubles and visits discontinued, I was called again to find her with inflammation of two thirds of the right breast, followed by small multiple abscesses There had been no exposure, the foot not having been placed on the floor since the occurrence of the phlegmasia

Nov 20, 1887 I was called to see Mrs S , a German woman, aged 37 years Having had eleven premature deliveries and no living children, she was far from being vigorous She was advanced 250 days in her twelfth pregnancy Had been confined to her bed eight days, and during that time had felt no motion No fœtal heart sounds recognizable Labor was progressing slowly, retarded by an un-

yielding cervix, and was completed in twelve hours The placenta was promptly expelled, but was followed by an active hæmorrhage that required a second injection of hot water to arrest it Antiseptic napkins were kept over the vulva, and the vagina washed out every twelve hours with a three per cent solution of carbolic acid The patient doing well, necessary directions were given and visits discontinued on the third day

Nov 29 Was recalled at 1 A M Found the patient, who had not been out of bed or exposed to any extraneous impression that would tend to local irritation or inflammation had been, without premonition, seized with intense pain in the right lung and pleura There was agonizing dyspnœa, superficial, hurried and anxious breathing, pulse feeble and rapid (150), and temperature 101°F The lochia was free and the generative organs in good condition A hypodermic injection of morphia, with elix val ammonia and hot jacket poultices gave relief She was treated *secundam artem* until Dec 8, when visits were discontinued

Dec 11 Was recalled to find the patient with phlegmasia dolens The calf of the left leg was irrecusably pinned to the bone, swollen and tender, with tenderness along the entire track of the crural vessels Treatment was prompt and there was a gradual subsidence of symptoms

Dec 18 Sent for in haste Found the patient suffering from severe pain and great tenderness in the region of the sigmoid flexure of the colon, with corresponding depression and disturbance in the circulation With hot fomentations, anodynes, stimulants and antiseptics the patient was relieved and made a favorable recovery

These cases are not reported for the purpose of detailing treatment, which was adapted to the symptoms and pathological expressions as apprehended, using such agents as carbonate of ammonia freely, sulphocarbonate of soda, sulp quinia, tr ferri chlorid, etc, but rather for speculation upon cause and pathology Coming near together and quite unique they were of more than ordinary interest

Whilst various causes, other than those consequent upon the sequalæ of labor may give rise to phlegmasia dolens, it is so largely a sequent of labor that we look to the conditions then present for its typical cause The decomposing contents of the uterus and vagina, through the denuded inner surface of the one and the abrasions in the other find ready ingress to the circulation, when they may give rise to such diseases as puerperal fever, or may cause embolism or thrombus, for, as Dr H Lee has shown by ample experiment, blood admixed with purulent matter will coagulate much sooner than when left without such admixture And so the experiments of Dr McKenzie demonstrated that the obstruction of the veins met with in phlegmasia may be excited by various unhealthy matters in the blood, and that its cause *is to be sought for in a vitiation* of the circulation rather than in injury, inflammation or other diseases of the veins Dr Tilbury Fox, in two papers read before the London Obstetrical Society in 1861, evolves as one of his conclusions "The rapid ingress of abnormal fluid suddenly and in large amount will cause instantaneous coagulation of blood, and that large drains from the system are followed by rapid and compensating absorption"

In labors associated with excessive hæmorrhage or other unusual sources of exhaustion, the uterine tissues are relaxed and there is profuse lochia with excess of decomposing detritus The depleted circulation takes up with avidity whatever is within its reach In the poisoned blood, consequent upon this, rapid osmosis is sufficient cause for the formation of coagula, either in the form of emboli or thrombi, which since the investigations of Virchow are considered the sufficient if not the sole cause of phlegmasia dolens But why should we confine the embolus or thrombus to the crural vein? If the morbid material inducing it enters the portal circulation it must go thence through the liver to the vena cava, through the right side of the heart into the pulmonary artery, through the lung to the left side of the heart, through the aorta to the distal extremity of the arterial circulation and through the capillaries of the leg to be returned as far as the crural vein, where, perhaps from pressure of the uterus or a loaded sigmoid flexure, or the narrowness of the crural ring, the passage of the blood is obstructed and a thrombus formed, either by the accumulation of emboli or by coagula forming on the venous walls While certain vessels, from location or construction may be specially liable to obstruction from thrombus or emboli, when the circulation receives those poisons that tend to coagulation can we with any certainty predicate where the burden will fall?

A much lamented President of the United States was shot by an assassin, standing six feet in his rear A No 42 conical ball, from an English bull dog pistol, went crashing through a floating rib, arrested only by its passage through the first lumbar vertabræ While Bliss and his associates, supposing it had been deflected from its course by the rib, an intercostal muscle, or perhaps the liver, and were locating it with their "plumbometer" in the right iliac region, the decomposing tissues burrowing along its track were manifesting their presence in distant parts of the body So when a circulation, poisoned with decomposing lochia, or other contamination shall presage embolus or thrombus there is no law whereby their lodgement shall be restricted to any given locality

A coagulum arrested in the crural vein may cause a phlegmasia and its peculiar milk white swelling from obstruction of the lymphatics, and the dolens or partial paralysis from pressure upon the nerves, and there may be crural phlebitis, but the emboli are not necessarily confined to the crural veins, and even when thrombus has occurred then it may be broken up into emboli that may manifest their presence in distant parts, just as cancer cells escaping from a cancer of the stomach may be arrested in the liver, or escaping thence be lodged in the capillary circulation of the pulmonary artery or elsewhere *So the* emboli consequent upon the causes of which I have spoken may be arrested in the liver, lung, mesentery, brain, mammary gland or crural vein

Austin Flint, "Practice of Medicine" p 78, says "The embolic changes, embraced under the name of infarctus, in the comprehensive sense of the term, are especially liable to occur in the spleen, kidneys, lungs, liver and brain, In the lungs small extravasations of blood, circumscribed gangrene, lobular pneumonia and little abscesses are local events attributable to pulmonary embolism"

In the cases reported we were unable to find other cause for the various lesions noted than a poisoned circulation ultimating in embolism If we are correct they are of unusual interest in illustrating the varied phenomena resulting from that cause The patients exhausted and depleted by previous disease, labor and uterine hæmorrhages, their excessive lochial discharges found ready admission to the circulation, causing the formation of emboli In both cases the emboli entered the right lung through the pulmonary artery and were lodged in its capillary distribution, ultimating in pneumonia. In both cases they collected in the crural vein producing thrombus and phlegmasia dolens, in one case inflammation and multiple abscess of the right mammary gland, and in the other embolism of the mesenteric gland

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SYPHILIS, MARRIAGE, AND DIVORCE

Read before the Section of Practice of Medicine, Materia Medica and Physiology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY JOHN V SHOEMAKER, A M, M D,

OF PHILADELPHIA

The relation of syphilis to marriage is one of irreconcilable antagonism, and if the old maxim of "once syphilitic, always syphilitic," were true, the conscientious physician would be compelled to forever forbid matrimony to those who have been contaminated by the virus of syphilis Fortunately, however, syphilis is usually a curable, and in some cases a self limited disease, and when the system is no longer under its influence marriage is permissible, and even advisable

When can a person who has had syphilis marry without running the risk of transmitting the disease to his wife and children? Not until he is completely cured This is, of course, an indefinite reply, but no absolute rule can be made which will meet the indications of every case Each case must be studied by itself The age, habits and general condition of the patient, the character and duration of the attack, the nature and extent of the medicinal treatment, and the age and general condition of the other partner in the proposed matrimonial compact, must all be carefully considered

Syphilis, as a rule, is less severe, and shorter in duration, in the young and robust than in the old, and in those debilitated by anæmia, scrofula, malaria, anxiety, and alcoholic and other excesses The macular and papular varieties are indicative of a mild type of the disease, while the pustular, bullous and tubercular forms are evidences of its obstinacy and malignancy The character and amount of the medicinal treatment is also of importance in deciding the question There are various remedies which possess the power of abating the symptoms of the disease, but mercury and iodide of potassium are the only medicines which can eradicate the disease from the system, and even they must be given continuously or at intervals for a long period

The age and general condition of the other partner in the intended marriage must also be taken into consideration Extreme youth, anæmia, debility, or the existence of the strumous or tubercular diathesis, should be regarded as almost insuperable barriers Robust health, and young, adult age render the system less susceptible to insidious injurious influences

As a general rule, patients presenting a mild type of syphilis may be permitted to marry within two years or two years and a half after the time of infection, provided they have been under proper mercurial and restorative treatment for eighteen to twenty months, and have not manifested any symptoms of the disease, nor deterioration in general health, during the six or eight months immediately preceding marriage

The reappearance of the symptoms, or a decline in general health, is a contraindication for the marriage for another extended period

If the case has been of the malignant variety, characterized by the formation of large pustules, bullæ, tubercles, and rupial sores, medication should be continued for from two and a half to three years, and marriage not allowed for another year, and then only on condition that no suspicious symptoms manifest themselves in the meantime

Syphilis of the nervous system or of the viscera should preclude marriage for at least five years, during which specific treatment should be thoroughly but judiciously carried out

If syphilis of any variety unfortunately develop or be contracted after marriage, the utmost care should be taken to avoid communicating it to the innocent party Sexual relations should be suspended, and kissing and all other familiarities avoided until vigorous specific treatment has removed the lesions and annihilated the poison of the disease If these precautions be disregarded, and pregnancy unfortunately supervene or evidences of infection appear in the wife, she ought also be placed upon a decided specific and tonic plan of medication, or the most deplorable results will follow

Syphilis in Relation to Divorce—Public opinion has been so profoundly shocked by the scandalous facility with which divorces may be obtained in many States, that the tendency of future legislation will be to lessen rather than to increase the number of causes which are to be regarded as justifying a legal dissolution of the matrimonial bond Care should be taken, however, to prevent the reaction from becoming so extreme as to preclude the addition of salutary amendments to existing laws upon the subject The sanctity of the marriage contract is not attacked by indicating the various circumstances which impair its integrity Every civil and ecclesiastical code plainly sets forth a greater or less number of reasons which

either render the marriage contract absolutely null and void, or which justify its limited dissolution It would be folly, however, to claim that any particular code will be found sufficient for all ages and all nations Laws must be modified in accordance with the exigencies of the occasion and the habits, virtues, vices and necessities of the people for whom they are made, and the law of divorce is no exception At present, desertion, cruel treatment, adultery, and various bodily and mental defects are recognized to be so destructive of the peace and happiness characteristic of the true marriage state, that they are declared by law in all countries to justify, if not to necessitate, partial or complete divorce

There is a more dangerous and more insidious source of domestic misery, however, than any yet named Syphilis is more subversive of the objects of the matrimonial compact than all the offenses enumeerated upon the statute-book The principal object of marriage is the propagation of a healthy race Syphilis poisons the fountain of life at its source Marriage is presumed to be the bond of affection between two of the noblest of God's creatures Syphilis converts it into the shackle by which the living is chained to the loathsome dead The evils which the syphilitic husband entails upon his wife, his offspring and society at large, are so many as to almost defy enumeration

Is it not, then, right and proper that syphilis should be recognized as first among the causes which justify the innocent party in applying for divorce If may be objected that the provision relating to adultery as a basis for proceedings in divorce is sufficient to protect the interests of all concerned Sad experience, however, declares that it is not The proof of adultery is difficult, and sometimes impossible, to obtain, unless the guilty parties are caught *in flagrante delictu*, and in many cases the disease dates from before marriage The present active existence of syphilis, however, is readily ascertained It may be also objected that syphilis may be unwittingly or innocently contracted in the discharge of professional duties, and a hundred accidental ways, and that it would be exceedingly reprehensible to permit such an unfortunate occurrence to be used as a pretext for violating a sacred compact and exposing a blameless person to the derision of the world This objection is deserving of consideration, but any proposed law could be modified to meet it No man worthy of the name would insist upon the continuance of marital relations under such circumstances, and no true woman would insist upon partial or complete separation in such a case, unless compelled to do so for self protection He or she should however, be given the legal privilege to do so as a last resource

The famous Colin Campbell case proves that such an amendment of the law is necessary The plaintiff, Lord Colin Campbell, applied for an absolute decree of divorce from the defendant, his wife, Lady Mary Campbell, upon the ground of adultery and desertion The facts as developed by the trial were that, when Lord Colin was married, he was suffering from a complication of venereal disorders, and that as a result of his diseased condition, the consummation of the marriage was followed by a violent attack of metritis and perimetritis, which seriously prostrated the defendant After a tedious illness she recovered, but refused to permit a renewal of the marital relations The honorable Lord then determined to humiliate and disgrace her by accusing her of adultery and desertion and applying for a divorce, which he believed his rank and prestige would enable him to obtain at once Fortunately, however, Lady Mary Campbell had a host of friends who demanded that an exhaustive inquiry should be instituted before any decree would be made The testimony was published, and popular sympathy was manifested so strongly in behalf of the injured wife that the court dismissed the noble Lord's appeal Owing to the defect in the law which I have pointed out, Lady Campbell is practically without redress She has been injured in health, injured in reputation, publicly villified and privately slandered by a miserable wretch whom she is still compelled to call husband

Is not this anomalous and disgraceful in the extreme? Yet there are many cases continually occurring in all countries in which equal or greater misery is inflicted upon the innocent victims of man's selfishness, ignorance, or brutality It is high time that the protective ægis of the law should be extended over this numerous and long-suffering class All that is necessary is the enactment of a clause substantially stating that syphilis shall be sufficient cause for an action for absolute divorce, or for divorce with alimony, at the option of the aggrieved party It might also be advisable to add an amendment declaring the wilful concealment of syphilis or other venereal diseases at the time of marriage, or communication of their contagion at any time, to be a misdemeanor punishable by fine and imprisonment

I am aware that these proposals will not now meet with universal approbation, but I am convinced that they will meet with increasing favor in the future, and that it will not be many years before similar or even more stringent and more salutary measures will be incorporated in the statute books The fear that some may entertain that public demoralization would be increased by proceedings based upon such an enlargement of the divorce laws would not be realized The proposed amendments would practically prove most beneficent by their preventive, rather than by their penal character

MEDICAL PROGRESS

CARBONATE OF LIME IN CANCER.—DR PETER HOOD, in an article on "The Administration of Carbonate of Lime as a means of arresting the Growth of Cancerous Tumors," says Nearly twenty years ago the *Lancet* published a communication from me on the value of carbonate of lime in the form of calcined oyster shells as a means of arresting the growth of cancerous tumors and I am anxious once more to call attention to the subject, and to urge upon those who possess the necessary facilities that

a more extended trial should be given to this agent than it appears yet to have received My own opportunities of employing it in suitable cases have not been large, but the results which I have witnessed have been sufficiently remarkable to justify me in seeking for them a more extended publicity In the paper referred to I related in detail the case of a lady nearly 80 years of age, who was the subject of schirrus of the breast, and in whom the growth sloughed away and left a healthy surface after a course of carbonate of lime, administered in accordance with a recipe which was current in her family She manufactured her carbonate of lime by baking oyster shells in an oven and then scraping off the calcined white lining of the concave shell The substance thus obtained was reduced to powder, and as much as would lie on a shilling was taken once or twice a day in a little warm water or tea It was said that perseverance for at least three months was necessary before any good result was to be expected I presume that the powder would be almost pure carbonate of lime, but it might possibly contain a small admixture of iodine The immediate cause of the publication of my paper was a conversation with Mr (now Sir) Spencer Wells, to whom I related the particulars of the case above mentioned, and of one or two others which had fallen under my notice, and who suggested that the beneficial action of the powder might be due to the lime it contained He told me that he had used lime largely in the treatment of uterine fibroids and other tumors, and that he was convinced that processes of atrophy and calcification resembling the spontaneous change or degeneration sometimes observed in them were often produced or promoted by its action He added that he believed the change commenced in the coats of the arteries by which the tumors were supplied with blood, and that these coats underwent first an atheromatous and subsequently a calcareous degeneration, in either case with a diminution of the calibre of the vessel and a lessened capacity for the conveyance of blood

After the appearance of my paper I was applied to by several persons, with an inquiry as to whether their cases were suitable for the employment of the remedy, but in most of these instances I subsequently found that it had been taken for only a few weeks, and then abandoned because no result was apparent I should not hope for manifest benefit in any instance under three months of persistent treatment A notable exception to the ordinary want of perseverance was furnished by the wife of a physician practising at Reading This lady was the subject of a well marked schirrus of the breast, which I had myself an opportunity of examining After a fair and persistent trial of the calcined shell powder for three months, her husband reported to me that "the tumor had ceased growing and that she suffered no pain" She continued to take the powder for several months longer, and for several years her husband paid me an annual visit, always giving the same account, "that his wife never suffered any inconvenience or pain from her disease, the progress of which had been stopped"

The ordinary history of true cancer is such a dismal record of failure, that I think even a few instances in which benefit has been derived from a harmless remedy should encourage the profession to make trial of it in all suitable cases It would probably be inexpedient, generally speaking, to disclose the nature of the medicine, and the public mind is by degrees becoming permeated by the knowledge that many important medical actions can only be gradually produced We have no difficulty in inducing patients to submit to prolonged courses of mercury in the treatment of syphilis, and there is no reason why they should not do the same in a malady which, if possible, is even more formidable Up to the present time the narratives of cures of cancer have been chiefly suggestive of errors of diagnosis, and no assurance of the value of any proposed remedy can be obtained until it has been used in a sufficient number of instances to exclude the possibility of such errors having been committed in the majority of them Although the experience of Sir Spencer Wells with fibroids points to the probability of a beneficial action upon soft and vascular growths, those which I should myself select for the purpose of further investigation would be typical examples of breast schirrus, adherent tumors of stony hardness, attended by retraction of the nipple and lancinating pain About the nature of such it would seldom be possible to entertain a doubt As an example of the uncertainty which may overhang the true characters of growths which do not present the symptoms above described, I may mention that I was once consulted by a lady living in the north of England, who had a swelling in her breast which had been pronounced to be cancer by her family medical attendant, and also by two consultants called in from the neighboring country town She was urged to submit to an operation, but, before consenting she came to London for further advice She paid separate visits to Sir James Paget, to the late Mr Skey, and to me I was the first whom she visited, and I gave an opinion that the tumor was a harmless one and might be let alone Her second visit was to Mr Skey, who said without hesitation that it was a cancer, and advised removal Her third visit was to Sir James Paget, who said that the growth was innocent It was let alone and the patient has had no further trouble from it for twenty years Again, I was lately consulted about the case of a well-known nobleman, who had a soft growth in the front of his chest over the upper part of the sternum, which quickly attained a considerable size, and was pronounced to be malignant by eminent authorities It disappeared entirely under a course of small doses of the perchloride of mercury

It is therefore not in cases which admit of any reasonable doubt of their nature that I would desire to urge a trial of the lime powder upon the profession There are hundreds of instances of unmistakable cancer in which an operation, if performed, may perhaps for a time diminish suffering or may prolong life, but in which it cannot afford any well grounded hope of restoration to health For all such I would say that the lime ought to be persistently and fairly

tried It can do no possible harm, it need not interfere with any remedies for the present relief of pain, its action can be referred to a perfectly intelligible and probable hypothesis, and it has been of unquestionable utility in a sufficient number of cases to warrant us in reposing some confidence in its use We have a great hospital devoted to cancer, and cancer wards in others also, and I think the time has come when this simple means should be fairly tested by the profession It is not long since we witnessed an extraordinary eagerness to try the Chian turpentine, which was so much extolled by Dr Clay, and in support of which the *primâ facie* case was nothing like so strong as that in favor of the remedy to which I desire once more to call attention —*Lancet*, May 7, 1887

The Contagium of Scarlet Fever —The remarkable chain of evidence whereby Dr Klein has been enabled to substantiate the results of Mr Power's investigation upon the transmission of scarlet fever direct to man from the cow, seems to leave little room for scepticism, that in the streptococcus met with by Dr Klein, we have the effective agent in the etiology of this disease, and, scanty as prior observations are, imperfect as many of them have been, it is noteworthy that hitherto the scarlatinal microbe has been described as a micrococcus Coze and Feltz found micrococci in scarlatinal blood, Cornil in the urine in scarlatinal nephritis, Babes describes streptococci in post scarlatinal inflammatory products, and Pohl Pincus found "very minute micrococci adhering to the scales of the desquamating epidermis in scarlatina" (von Klein "Micro organisms," third edition) The isolation, cultivation, and successful inoculations practised by Klein, however, far outweigh all such partial observations But, as in the case of diphtheria, so here, it would seem that other observers have arrived at the conclusion that the scarlatinal microbe is a bacillus, and not a micrococcus Drs Jamieson and Edington, of Edinburgh University have completed a series of observations, which arrive at this result their plan of procedure being to examine the blood of scarlet fever patients as early as possible, to sterilize an area of skin and protect it from contamination till desquamation occurs, and then to examine the desquamated epithelia for organisms They found a bacillus in each of these media, and succeeded in reproducing a disease like scarlet fever in calves and other animals inoculated with pure cultivations of this bacillus Further tests by examination of the blood of the inoculated animals and pure cultivations therefrom also yielded positive results Until the details of their research are published it would not be fitting to attempt any critical comparison between them and those obtained by Dr Klein The fact that the blood of scarlatinal patients has been frequently examined without result makes it at first sight more probable that the minuter organism has been overlooked, but much also depends upon the technical skill of the observer, and bacteriological methods are daily being perfected It is curious that a disease so obviously contagious as scarlet fever should hitherto have baffled the attempts made to isolate its virus, and almost simultaneously investigations should be in progress with this object, and with such apparently conflicting results —*Lancet*, June 11, 1887

Suction-Pump Action of the Mammalian Heart —That the heart acts not only as a force-pump during its systole, but during its diastole actively expands and thus gives rise to a negative pressure, which causes blood to move from the systemic veins to the right auricle, has long been maintained But the question still remains whether, after the thoracic cavity has been opened, the heart expands in diastole passively in consequence of the positive pressure exerted by blood drivers into its veins, or actively, and in the latter case, by causing a negative pressure, causes blood to flow towards itself, even when there is no positive pressure in the venæ cavæ

The outcome of the experiments of Drs H Newell Martin and Frank Donaldson is this that once the "aspiration of the thorax" has been eliminated, the right auricle of the mammalian heart will not receive blood unless supplied to it under a decided, if small, positive pressure While the heart in the closed thoracic cavity may, and probably does, act as a suction pump, this is not due directly to an active expanding force of the heart, but is the secondary result of the pneumatic conditions prevailing within the normal closed chest cavity Any cause diminishing thoracic aspiration must, therefore, greatly hinder the work of the heart, and it is probably more in this manner that the circulation is impeded in certain cases of hydro or pneumothorax than by direct pressure exerted on the heart itself —*Studies from Biolog Lab Johns Hopkins University*, Vol IV, No 1

Hypodermic Injections of Cocaine in Tetanus —Dr M Lopez reports the following case in *El Genio Medico Quirurgico*, for February 7, 1887 M G , 50, laborer, after working in the wet and cold complained of rheumatic pains of back and limbs Three days later he had marked opisthotonus and painful cramps, and all the symptoms of idiopathic tetanus Chlorol hydrate and morphine were prescribed For three days the patient was kept under the influence of these drugs, with the result that the pain was lessened, but the muscular rigidity and cramps increased He now became unable to swallow, and death seemed imminent Morphine was injected hypodermically, but was followed by no amelioration of the symptoms Three syringefuls of the mixed solutions of morphine and cocaine (each 5 per cent) were then injected The effect was immediate After two hours, he could move the limbs, turn in bed, and open his mouth On the next day he was going on well, slight trismus and stiffness of the neck remained On both sides of the neck, and *at the angle of the jaw*, a fourth part of the syringeful of the same solution was injected On the next day all the symptoms had disappeared The patient rapidly regained strength —*London Medical Record*, May 16, 1887

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THE MANAGEMENT OF EMPYEMA

A short time ago a very interesting discussion on this subject was had at a meeting of the Academy of Medicine of New York Were there nothing else to show the importance of the subject, the fact that it was made a special subject of discussion in the Section of Theory and Practice of Medicine of the Academy is sufficient And it may be said that almost the last days of his promising life were spent by the lamented E Darwin Hudson in the preparation of the work for that evening, in order to secure a representative discussion

One of the most important papers read was by DR L EMMETT HOLT, on "Spontaneous Absorption in Empyema in Children, and the relative Advantage in Children of Aspiration and Early Incision " While spontaneous absorption may possibly occur it is very rare, and it is evident that the chances of recovery by Nature's unaided efforts are very small The indication, then, is to get rid of the pus in the easiest and safest manner, and the best methods for doing this are aspiration and free incision The following advantages are claimed for the former 1 Simplicity, 2 Freedom from danger, 3 That it does not remove the fluid rapidly, 4 That it does not require general anæsthenia, 5 That it does not require the confinement of the patient to bed, 6 That many cases are cured by aspiration alone The disadvantages of the method are 1 The entire quantity of fluid cannot be removed by this means, 2 When septa exist in the pleural cavity but one division of the latter may be evacuated, 3 The terror often excited in children, especially when the aspiration has to be repeated, is a serious obstacle to its success, 4 There are certain cases in which aspiration is not available, and if the case is allowed to go on for a considerable time without evacuation, septicemia and other serious consequences may result

Among the advantages of incision are, its universal applicability, the fact that it enables the surgeon to explore the pleural cavity thoroughly As to the use of general anæsthetics, Dr Holt thought they should not be resorted to, as he knows of two cases (although both in adults) in which death resulted from rupture of a bronchus Local anæsthesia is, therefore to be preferred on the ground of safety While the exposure of the cavity and the admission of air were formerly well-founded objections to incision, since the introduction of antiseptics this is no longer the case Of 63 cases collected in which the operation was done under strict antiseptic precautions there were but two deaths, and, contrasting this happy result with former statistics, he thinks that no more complete evidence could be furnished as to the advantages of anæsthetics As to duration, out of 80 cases in which antiseptics are used, 5 cases lasted four months or more, and in the remaining 75, the average duration was six weeks In 21 it was one month or less In cases in which antiseptics were not employed the average duration was six months

Dr Holt's conclusions are somewhat as follows 1 All methods yield better results than non-interference 2 No one should ever be left to the unaided efforts of nature 3 Aspiration holds out a possible chance of cure, especially if the empyema is localized 4 If, after two aspirations, the fluid continues to accumulate, this method should not be persisted in 5 In large effusions it is well to make an aspiration before resorting to incision 6 In all other cases a free incision should be made, preferably under local anæsthesia Early incision, perfect drainage, and complete antisepsis, in the words of Wagner, offer the best chance of success in dealing with empyema

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DR HUBER, in a paper on "Acute Empyema in Children," advocated the use of the hypodermatic syringe for diagnostic purposes, and expressed the opinion that the more promptly surgical interference was made, in general, the better the results would be, provided this be not done during the first few days of the attack As a rule, it is better to wait until a week or ten days have passed, so as to allow the acute febrile symptoms to subside, and give the patient a chance to rally Dr Huber agrees that aspiration should first be resorted to, but if the result is not satisfactory, incision should not be long de-

layed, as the disease is characterized by fibrinous deposits as well as by purulent effusion, and the fibrin may decompose and cause sepsis Local anæsthesia is secured by cocaine, and in order to prevent the drainage tube from slipping into the cavity he uses Baxter's method Injections of bichloride solution (1–5,000) are used in all his cases The retraction of the chest remaining on the affected side may be overcome by suitable gymnastics and exercise in the open air

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In a general consideration of the *surgical treatment of empyema*, DR ROBERT ABBE considered aspiration of more service in children than in adults, and as it is somewhat repugnant to the surgical mind to leave even a small quantity of pus in a place like the pleural cavity, he thinks complete evacuation should be practised as soon as it is evident that aspiration is insufficient to effect a cure The best results thus far have been obtained from free incision In doing this he uses a carbolic spray produced by a simple hand-bulb Two large drainage tubes, of the thickness of the little finger, are advisable, and he usually dresses the wound with bichloride gauze and iodoform A thorough outlet is essential, and the other important factor in the success of the treatment is the purity of the wound In the great majority of cases he does not think it necessary to inject the cavity, but when there is a hectic condition antiseptic injections, followed by hot-water ones, should be employed Two serious results have been observed from injections, namely toxic symptoms from the agents used, and sudden death, due probably either to thrombosis or reflex influence The drainage tube occasionally causes denudation of the periosteum of a rib, which has been erroneously designated as necrosis When this occurs resection must be done, but he thinks it unjustifiable to resect at first When there is decomposing fibrin, resection is sometimes called for in order to secure free irrigation, and occasionally when a suppurating cavity remains after empyema, Estlander's operation of resecting several ribs is very satisfactory As regards anæsthesia for incision, he thinks that in children a few whiffs of chloroform answer perfectly well, but in adults local anæsthesia with cocaine is preferable

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DR ALFRED L LOOMIS believes that acute empyema is very common in children, and when he finds that a child's chest fills rapidly he feels pretty confident that empyema is present The treatment which he adopts is, in the main, such as has already been described Acute empyema in adults is a totally different affection, being an infectious and dangerous disease, often proving rapidly fatal, and it cannot be cut short by removing the products of inflammation After the acute stage has passed, however, he thinks incision does good, and is called for Chronic empyema is not a simple pleurisy We have not merely the pleural cavity to deal with, but a serious constitutional condition, and it is necessary to sustain the patient's vital forces in every possible way

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DR JOSEPH E WINTERS differed materially from Dr Loomis and some of the other speakers in his views of empyema in children He has careful records of 90 cases of pleurisy in children, and in only 4 of these was there empyema In the latter this condition already existed when the patients first came under observation, and of the remaining 86 cases, not a single one terminated in purulent effusion In simple pleurisy the temperature sometimes rose to 103° and 104°, but under rest, hot applications, and sedatives, the cases almost all terminated in resolution in the course of a week or so, and in no case under his care has empyema resulted Two cases were operated on account of the mechanical pressure produced by the large effusion present, and while they were both fatal, at the autopsy no pus was found in either case He has never seen a case of empyema in a child in which there was not an abundance of serum, and he therefore thinks that the fluid in such cases is capable of absorption Hence the condition is very different from that existing in empyema in adults, and he does not deem it necessary to resort to surgical interference except to relieve the effects of mechanical pressure on the viscera He also objects seriously to the use of the hypodermatic syringe or the aspirator, unless there is surgical necessity, as he thinks the entrance of the needle into the pleural cavity is a very common means of turning a simple effusion into empyema, an opinion in which Dr Francis Delafield coincides When in cases of empyema operative procedure is called for, he thinks that free incision was greatly preferable to aspiration

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Cases have been known in which hæmorrhage after incision for empyema was sufficient to cause death DR T HERRING BURCHARD mentioned two such cases, both most probably cases of capillary hæmorrhage, such as is sometimes seen after sudden and complete evacuation of a distended bladder As suggested by DR HEINEMAN, this may be prevented by injecting a certain amount of fluid into the pleural cavity, and allowing it to remain In the same way may the coughing set up by the removal of fluid from the pleural cavity be relieved

MEDICAL COLLEGES IN GOOD STANDING

The first part of the first *Section* of the Act to Regulate the Practice of Medicine in the State of Illinois reads as follows

"That no person shall practice medicine in any of its departments in this State unless such person possesses the qualifications required by this Act If a graduate in medicine, he shall present his diploma to the State Board of Health for verification as to its genuineness If the diploma is found genuine, and from a legally chartered medical institution *in good standing*, and if the person named therein be the person claiming and presenting the same, the State Board of Health shall issue its certificate to that effect signed by all the members thereof, and such certificate shall be conclusive evidence as to the right of the lawful holder of the same to practice medicine in this State"

At the regular quarterly meeting of the Illinois State Board of Health held in the Grand Pacific Hotel, Chicago, July 8, 1887, the following resolution was adopted

"*Resolved*, That the phrase 'medical colleges (institutions) in good standing,' in the first Section of the Act to regulate the practice of medicine, approved June 16, 1887, is hereby defined to include only those colleges which shall, after the sessions of 1890–91, require four years of professional study, including any time spent with a preceptor, and three regular courses of lectures as conditions of graduation"

The questions, what is the legitimate meaning of the phrase "a legally chartered medical institution in good standing," and what the evidence required to establish its "good standing"? are assuming an importance that will, at no distant day, compel answers from some tribunal whose decisions will command respectful obedience Does the *good standing* of a medical institution depend upon the fact that it faithfully and honorably complies with the requirements of its charter and the promises of its annual announcements to the public, and that its graduates are cordially received and recognized by the medical profession and the community? Was that the sense in which the Legislature of Illinois used the words "good standing" in the law for regulating the practice of medicine, or were these two apparently innocent words intended to confer upon the Illinois State Board of Health full *legislative power* to dictate alterations and amendments in the powers, duties and curriculums of all the medical colleges in the United States, in order to place them in the attitude of "good standing" before that Board? And not only this, but also the extraordinary power of legislating in advance and defining what the medical educational institutions must do three years hence as set forth in the resolution quoted above The resolution declares "that the phrase 'medical colleges in good standing,' is hereby defined to include only those colleges which shall, after the sessions of 1890–91, require four years of professional study, and three regular courses of lectures as conditions of graduation" Having *hereby* and *now*, declared that *only* those medical colleges which comply with certain specified conditions in 1890–91, shall be recognized as in good standing, will the Board go on recognizing the diplomas of colleges *not in good standing* for the next three years, or is the concentrated wisdom of homœopathy, eclecticism and regular medicine, as combined in the Illinois State Board of Health, equal to the task of discerning now which of the colleges will comply with the conditions specified after 1890 Finally, is the Illinois State Board of Health an executive body charged with certain clerical and important duties, or is it also a legislative body with full power to enact all such laws as it may deem necessary to regulate the education and practice of the medical profession of the State, altering and amending, elevating or debasing the same, from year to year according to its own pleasure? Let no one infer that the foregoing questions have been prompted by any opposition to a period of four years of medical study and three annual college courses of lectures, of not less than six months each, when the same shall be embodied in a carefully prepared law containing such additional provisions as are necessary for its efficient execution, and enacted by the acknowledged legislative authority of the State But we are getting a little weary in witnessing more quack *medical legis*tion than we have quack medical practice

INTERNATIONAL MEDICAL CONGRESS RAIL ROAD RATES

The rate upon all railroads, for those designing to attend the Congress to be held at Washington in September next, has been made at one and one-third fare for the round trip, tickets to be issued on the certificate plan We ascertain from the passenger department of the Baltimore & Ohio R. R Co, that no pains will be spared by this Company to afford all the comforts in their power to promote and enhance the pleasure of visitors to the Congress, and that the railroad rate from Chicago to Washington and return will be $23 35

The above announcement of the general reduc-

tion of railroad rates for all those intending to attend the International Medical Congress, to convene on the 5th of September next in Washington, D C, indicates that the preliminary arrangements are nearing completion Several months since liberal rates of reduction were announced for nearly all the important transatlantic steamship lines, and many on the other side have already engaged their berths for the voyage The reduction of hotel rates in Washington, the engagement of suitable rooms for the Congress and its many Sections, were announced soon after At the recent meeting of the Executive Committee a speedy completion of the programme of scientific and practical work was provided for, and the Committee of Arrangements at Washington have planned a liberal and appropriate series of entertainments, embracing an excursion to Mt Vernon, a grand banquet, and a more grand excursion for the guests from other countries, from Washington to Niagara Falls and return to the sea board Only one thing more is necessary to relieve the hard working Committee of Arrangements at Washington from anxiety, and that is to have three or four more State Medical Societies in rich and populous States, like Ohio and Indiana, follow the example of Pennsylvania, Illinois, and Michigan, and send to the Treasurer of the Congress, $1000, $750, or $500 each, and as many of the Societies in the larger cities follow the example of St Louis and Pittsburgh, or Alleghany Co, by sending $200, or $250, each, and thus make the entertainment fund good But individuals who have plenty need not wait for societies to do all, but should send their contributions at once It is important that all money, either from societies or by individuals should be forwarded as early as possible to the Treasurer, Dr E S F Arnold, Newport, Rhode Island

ADDRESSES FOR THE NEXT ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION

We learn from the Chairman of the special Committee, that Professor J L Cabell, of Va, who was selected to deliver the Address on State Medicine at the meeting of the Association to be held in Cincinnati, May, 1888, has been constrained to decline on account of poor health, which will be very generally regretted The Committee have, however, been very fortunate in securing the services of H P Walcott, M D, of Mass, in the place of Professor Cabell Dr Walcott has been long and efficiently connected with health matters in Massachusetts and is an Ex-President of the American Public Health Association, and an address by him will be listened to with more than ordinary interest Dr E M Moore, of Rochester, N Y, has accepted the appointment to deliver the Address on Surgery at the meeting to be held in Cincinnati Dr R Beverly Cole, of California, who was selected to give the Address on General Medicine, has not yet made any reply to the invitation extended by the Committee

THE ILLINOIS LAW AND INDIAN DOCTORS.—The amended Practice Act which enables the State Board of Health to deal with itinerant "doctors," "Indian doctors," and the like, seems to be driving some of them from this State The newspapers this week show that a good many of them are in serious trouble in adjoining States

CHOLERA IN SICILY.—A cablegram of July 12, says that cholera, which is broken out in Sicily, is increasing There have been 200 cases at Catania, with 140 deaths The Neapolitans are alarmed on account of the arrival in their city of numbers of fugitives from Sicily

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY

Stated Meeting, May 2, 1887

THE PRESIDENT, W T BELFIELD, M D, IN THE CHAIR

(*Concluded from page 59*)

DR C T PARKES exhibited some

URETHRAL AND VESICAL CALCULUS

This is a urinary calculus removed from the urethra, and with this history The man says he has had trouble for six years in urination, that he has been treated a good many times for retention of urine, that he suffered great pain and distress in urination during that time Three weeks ago he was brought to my house for the purpose of relieving him of acute retention, he had not passed urine for six or eight hours, and was in great distress Supposing I had a case of tight stricture to deal with, I attempted to pass a very fine whalebone bougie I passed it down the urethra and found that it struck against and was stopped by something that seemed rough I then attempted to pass in a metallic sound, trying different sizes, but found it impossible to strike this body with any sound, the only instrument I could get in contact with it was a whalebone bougie Then I introduced my finger into the perineum and immediately it came upon the foreign body bulging directly into the perineum before the finger entered fairly into the anus, apparently lying in a horizontal posi-

tion, and so evidently in the membranous portion of the urethra I advised immediate operation, as I could not get any instrument into contact with the foreign body It was a new idea with the patient that he had a foreign body in this place, and he wanted to consult with his wife, he went away and two weeks subsequently he came to me for operation Upon examining the patient this body was now found just below the pubes I again made attempts to come into contact with the body through the urethra, supposing I might be able to withdraw it from the urethra with the forceps, but by no effort could I bring any of my instruments in contact with it During the first examination I made efforts by means of my finger and thumb to force this body back into the bladder, but failed to do it, before advising operation After placing him under an anæsthetic I made a direct incision and exposed the stone, which I had no difficulty in turning out It is very hard and shaped so as to most easily follow along in the course of the urethra The urethra in front of it was contracted down to an extreme degree The man is well For four days he passed water through the wound in the perineum, but in less than a week he passed it through the urethra.

In another case I was summoned to see a man whom I found suffering great agony in the desire to pass water The history was that he was taken with this trouble in the woods in Alabama, where he was hunting for timber, and he came to Chicago to be relieved of his trouble Upon examination I found *half way down the penal portion of the urethra a foreign body* I attempted to withdraw it with the forceps, but the loss of blood was severe, so I adopted this plan without an anæsthetic, and without any assistance, I displaced the elastic integument of the viscus to one side and fixed the foreign body, and then made an incision directly on to the stone and let it out The opening in the urethra was covered by the opening in the skin, and the man had no trouble except a slight amount of pain for a few days The stone was about the size of the end of the finger, and was very irregular

Three or four years ago Dr Moore sent to me a man about sixteen years of age, with a note saying this young man had a needle in his bladder The young man denied it, and said he had only a great deal of trouble in passing water When the sound got into the membranous portion of the urethra it struck the foreign body I made a good many attempts to remove it by means of forceps, I could seize the body with small forceps and withdraw it a short distance, but failed to get it any further I followed the young man to his home and calling on Dr Moore to administer an anæsthetic, I removed it without any difficulty by direct incision I will say that in examining the case the needle could be felt projecting into the bladder, and probably the anterior portion of it into the membranous portion of the urethra It is a large sized darning needle, as can be seen The patient never passed any water through the opening of the wound, the urine was extruded from the urethra the very first day

The vesical calculi which I have to show you embrace two stones that were removed from the bladder of a young man 18 or 20 years of age You can see that they fit together, and have rubbed each other smooth The young man had something of this history I saw him when he was 14 or 15 years of age, three years before he had received an injury by a fall from a building, when he struck upon the perineum and produced a traumatic rupture of the urethra, which finally recovered, and was followed by a cicatricial stricture, for which he submitted to an operation to by Dr Bogue, at that time Some five or six years after that he came under my charge with a return of the traumatic stricture They are difficult to overcome and are apt to return It was so tight that the smallest instrument could not be passed through it, so perineal section was determined upon Up to this time no examination had been made of the bladder, after the division of the stricture in the perineum and the entrance into the membranous portion was made, followed by the introduction of a small probe into the bladder, these stones were found and these two large calculi were removed from the median incision The incision was not increased laterally in any way, they had become partly prostatic in character and had dilated this portion of the urethra to such an extent that the median incision was all that was necessary

I show another case of calculi which is important When I exposed it in the bladder it was in the condition you see it now, and it raises the question whether a stone is ever fractured in the bladder This was taken from a man 67 years of age, by the lateral operation It was found fractured into these two pieces The man did not have any difficulty in his recovery, notwithstanding his age He passed water through the perineum for only three days Here is another stone If you look at one surface you will see that it is covered with blood When I made the examination it was impossible for me to find this stone except by passing the sound in one certain direction, and it immediately made the impression on my mind that the stone was fixed in its position I did a lateral operation and upon entering the bladder I found that only the upper part of the stone was exposed, the lower half was imbedded in the mucous membrane of the bladder By a considerable effort with one blade of the forceps I finally detached it from its bed This man was 24 or 25 years of age His wound was healed in nine days, and he was out on horse-back the second week after the operation It may be interesting to show you a specimen which illustrates the fact that the bladder may contain a stone of considerable size and for a long time without any symptoms whatever This was obtained under the following circumstances During my study of topographical anatomy, where I made a good many sections of the frozen bladder, I selected one patient who was not emaciated, where the whole surface shows evidence of good health He died of pneumonia I had his body frozen and made sections for other purposes In making a longitudinal section through the perineum I found a stone in his bladder It was of considerable size, as you see, but no symptoms in this patient indicated

the possible presence of a stone in the bladder It is as large as a turkey's egg, and is now in exactly the position occupied when the section was made

DR EPHRAIM INGALS once had a case calculus in the urethra that may be of interest in its relation to this subject, as presented by Dr Parkes A healthy man of about 25 years came to me, being unable to void his urine On examining him I found the bladder distended nearly to the umbilicus, and he was in great pain On attempting to introduce a catheter the instrument was arrested about one inch before it reached the membranous portion of the urethra As I do not practice surgery, I sought at once to place my patient in charge of one who made this branch a specialty I went with him to the office of Dr Moses Gunn, who introduced a metallic catheter of medium size by the stone into the bladder, and the water was all drawn off Considerable force was necessary to carry the instrument by the stone, and some blood followed the operation This was near evening The next morning I visited my patient, hoping to be able to remove the stone with forceps, but found that during the night the stone had been expelled It was about one half an inch long by one fourth of an inch in diameter, of irregular contour, and rough on the surface In three days the patient died from pyæmia No post-mortem examination was made, but I presumed that the urethra was wounded at the point where the catheter passed the stone The practical question this suggests is would it not have been better to have removed the stone by cutting down upon it, as was the practice of Dr Parkes in the case he has reported?

DR HENRY J REYNOLDS exhibited a stone passed involuntarily from the bladder of a woman, or rather without surgical interference, through the urethra It was an extremely large stone to pass through even the female urethra, and would of course have been an impossibility in the male The history in brief is as follows In July, 1885, I was called to see the lady, aged 16, small and delicate She had been troubled with frequent urination for two years, which ultimately became so bad that she was obliged to quit work The symptoms gradually became more and more aggravated until two months afterwards, when they finally culminated in the passage of this stone, with much straining and pain It is 1⅞ inches long, 1¼ inches broad, and weighs 405 grs There was no vesico-vaginal opening or fistula, but the meatus was very much lacerated and would admit the index finger readily into the bladder two weeks after the passage of the stone The bladder was examined for other calculi but none were found The urine dribbled away involuntarily for several months, finally the patient became able to retain part of it, and she is now able to retain all the urine and has become quite healthy This report may be verified by Dr E L McAuliffe, of Chicago, who also examined the case

DR PARKES said, in answer to Dr Ingals' question, that he would certainly make a direct incision in every case in which there was any difficulty in removing the stone from the urethra

DR WM T BELFIELD reported a case of

TRANSPLANTATION OF AN UNDESCENDED TESTICLE

The patient was a healthy youth 20 years of age, in his thirteenth year a small lump appeared in the right groin, during several years thereafter it increased in size, and frequently occasioned severe pain, especially during active movement Two physicians, consulted during this period, pronounced the swelling a hernia, and advised trusses, but these failed to relieve the symptoms, the patient being frequently unable to work or walk for several hours

The tumor was found, on examination, to be a fairly developed testicle, lying upon the middle of Poupart's ligament, just exterior to the external inguinal ring, no hernia The right side of scrotum was undeveloped The coverings of the testicle were exposed, the organ and its cord loosened by dissection, and the testicle was pushed down into the scrotum and stitched to the bottom thereof Dressings were so applied as to prevent retraction by the short cord The stitches, however, pulled out After healing the testicle was found, freely movable in its tunic, at the upper portion of the scrotum, just below the pubic arch The patient attends to his duties with perfect freedom from pain and discomfort This appears to have been one of those unusual cases in which a testicle, retained in the inguinal canal until puberty, resumes at that period interrupted descent Such tumors may easily be mistaken—as was this one—for hernia

OBSTETRICAL SOCIETY OF PHILADELPHIA

Stated Meeting, Thursday, April 7, 1887

THE PRESIDENT, THOMAS M DRYSDALE, M D, IN THE CHAIR

(*Concluded from page 652, Vol VIII*)

DR W H PARRISH reported a case of

LARGE OVARIAN CYST CURED BY EVACUATION, DRAINAGE AND OBLITERATION OF ITS CAVITY

On January 27, 1887, I operated on a Jewess, 27 years of age, for the removal of a large abdominal cyst I saw patient the first time on Jan 24 She was then under care of Dr N Hickman, who placed her under my care for operation She was the mother of four children, the youngest only four months of age In her last labor she had been attended by a midwife and but little reliable information could be obtained with reference to the existence of an abdominal tumor during the three weeks following labor The patient stated however, that her abdomen was not unusually large after the birth of the child About three weeks after labor she was under the care of Dr Hickman for a few days, during which time she presented the usual symptoms of general peritonitis She then passed into the hands of others and was not seen again by Dr Hickman until just before I operated During this period of three months she was visited by a number of medical gentlemen Aspiration was resorted to by one of the number Laparotomy was repeatedly urged but persistently refused by the pa-

tient The abdomen increased rapidly in size Pain became constant, appetite entirely disappeared, vomiting occurred at very short intervals Hectic became marked with occasional rigors, and emaciation had reached an extreme point The lower extremities were but slightly edematous and there was no special enlargement of the superficial abdominal veins The abdomen was greatly distended, tense and tender, and the patient was so exhausted that she could not rise from the semi recumbent position She was at once transferred from her surroundings of filth and poverty to a private hospital, and I operated without delay as it was apparent that without surgical relief her life could last but a few days longer There were present Drs Hickman, R P Harris, S D Lazarus, John Hand and F A Packard The patient had a general sponge bath with soap and water and stimulants had been administered Before etherization the pulse was 130 per minute There was a dull percussion note over the entire abdomen anteriorly and the diaphragm was pushed well upwards by the tumor Fluctuation was distinct though palpation suggested a thick walled cyst rendered very tense by reason of the degree of distension I gave a diagnosis of ovarian tumor with suppurating contents and extensive adhesions Incision 2½ inches long in median line, without opening the peritoneal cavity the knife cut into the cyst wall which was easily recognized by its consistence, color and anatomical elements There were anterior adhesions of great extent and firmness The cyst was opened and a quantity of pus like fluid of offensive odor escaped The cyst did not empty itself and the introduction of two fingers showed large masses of lymph like character varying in density and size The introduction of the hand was required to remove these masses In the interior were a number of thin septa such as are seen in colloid ovarian tumors The great bulk of the contents was an apparent mixture of pus, lymph and detritus, while part of the contents presented the translucent appearance of the fluid of some ovarian tumors After thoroughly emptying the tumor it was evident that its walls were everywhere adherent No portion of the wall could be brought into the abdominal incision There were evidently dense adhesions to the liver, spleen, stomach, intestines and to the pelvic brim and contents The tumor did not dip down into the pelvis, the walls were everywhere thick and strong, At this stage of the operation the patient's condition seemed threatening imminent death, pulse 140 and exceedingly feeble The ether was withdrawn and was not used again, stimulants were given hypodermically The thickness of the cyst walls and the universal adhesions rendered the case one well adapted to treatment by drainage I decided not to remove the cyst I now thoroughly cleaned its interior, introduced a glass drainage tube and approximated around it the walls of the abdomen and cyst, carrying the sutures into the cyst wall but not through it

The patient rallied well, and there was no ether vomiting For several days the discharge through the tube was of a purulent fluid similar to portions of that removed during the operation, its character then changed to that of ordinary pus The cavity of the cyst was daily emptied of about two ounce of fluid, and phenol sodique injected in the same quantity The abdomen was covered with a compress and binder to keep the inner cyst walls approximated, and to encourage absorption of the exuded lymph The area of dulness diminished rapidly from day to day and the discharge diminished with surprising rapidity At the end of two weeks a shorter drainage tube was substituted and at the end of three weeks rubber tubing about three inches in length was introduced in lieu of the glass tube The wound was entirely healed by the end of the fourth week Examination showed a small, flattened mass, two by one inches, underlying the abdominal wall and adherent to it The patient's appetite became ravenous a few days after the operation, and she was fed liberally The recovery of the patient is now complete, and I feel confident the cyst cavity is so effectually obliterated that it cannot refill Does the rapidity of the shrinkage and disappearance of the cyst indicate that it wat not an ovarian tumor? I answer in the negative It was not an extra nor an intra peritoneal abscess, for abscesses do not contain such septa nor such fluid The character of the contents and septa distinguish this case from two cases operated on by Tait, in which he ascribed the tumors to distension and suppuration of sacculated urachus In making the incision I recognized the peritoneum external to the cyst In my own mind there is no doubt as to the ovarian origin of the tumor A specimen of the tumor was examined microscopically by Dr F A Packard who has written as follows "I found it to be composed of numerous fatty degenerated epithelial cells, leucocytes and granular material entangled in a dense meshwork of fine homogenous fibrin like fibres There appeared to be no definite arrangement or other evidence of an organized tissue The general appearance was that of a tissue that had undergone complete fatty degeneration I, unfortunately, ruptured the small cyst, before I could collect the contents for examination" The paper will be published in full in the *American Journal of Obstetrics*

Dr R P Harris remarked that the cyst contents chiefly of a thin greenish fluid of a puriform character in which were found masses of cell structure, some of them as large as a fist, on the surface of which were in some instances still to be seen, small translucent cysts containing a yellowish fluid, there was also noticed during the emptying process an escape of fluid from cells which had preserved their integrity, and which resembled to the eye what is often seen in tapping during ovariotomy of multilocular tumors My own impression during the operation was that the tumor was ovarian The emaciated state of the woman, her rapid pulse, and the strong adhesions of the cyst wall to the abdominal parieties and viscera, satisfied me that any attempt to remove the cyst would cause the patient either to die upon the table, or of shock in a few hours Judging from the recoveries after the secondary operation in abdominal pregnancies where it has been found of vital importance not to remove the cyst, a measure the value of

appendix, and also near its extremity, and the sight of the ulceration and the intervening portion removed The operation was done with all antiseptic precautions and a drainage tube was inserted into the bottom of the abscess The temperature of the patient is nearly a degree lower (98 6°) this evening than it was this morning

Early in the illness a large quantity of urine was passed On Sunday, and again on yesterday, he passed a small quantity of blood in his urine Probably the abscess was pointing into the bladder The position of the tumor was unusual The protrusion was almost in the median line It is this that made us hesitate about adopting the diagnosis of perityphlitic abscess I learned to day that the patient had been subject to occasional attacks of cramps in the stomach for a year or two, but these were not referred especially to the right side

On making the section, pus was found in the muscles, and when the peritoneum was reached, it was found thickened, and pus was also under it As a result of the inflammatory process, the abscess had been shut off from the general peritoneal cavity The posterior layer of peritoneum had probably been destroyed by the abscess A solution of bichloride of mercury (1 2000) was used to douche the wound until the peritoneum was opened, when hot water was substituted The walls of the abscess cavity were scraped with the curette, and all sloughy tissues removed The wound was closed with deep and superficial catgut sutures, and iodoform applied upon the antiseptic gauze

DR EDWARD JACKSON reported a case of

SYMPATHETIC OPHTHALMITIS, WITH KERATITIS, RECOVERY, AFTER EXCISION OF THE EXCITING EYE

Sympathetic ophthalmia, like small-pox, is now more rare than formerly, because we have for it a reliable prophylactic That cases still occur is due to the fact that prophylaxis is sometimes neglected, and the continued diminution of their number depends, as with small-pox, upon keeping alive a just appreciation of the serious character of the disease, and the necessity for prophylactic measures

George M , æt 39, a carpenter came to me for inflammation of the left eye, which had commenced two weeks earlier, the eye having before that been perfectly well It presented a moderate conjunctivitis, the cornea was slightly hazy throughout, and there was a superficial ulcer near its lower margin and another near the upper outer border There was a marked pericorneal zone, broadest opposite the ulcers The iris seemed normal, the pupil was 5 mm in diameter, circular and immovable (he had been using atropia), and subsequent trials showed that 5 mm was the widest dilatation of his pupil that atropia or similar mydriatics would produce The media back of the cornea were normal The optic disk was *very decidedly* reddened, but not swollen nor indistinct of outline, the fundus otherwise normal The patient and Dr Hoskins agreed that the eye looked decidedly better than it had a few days before The right eye presented an adherent leucoma near the outer margin of the cornea, which was otherwise clear The pupil was distorted and closed by a dense white membrane, which, toward the inner side, fell back a little from the margin of the iris, indicating that the lens was absent from its normal position The tension of the globe was below the normal Good central light perception, but with the field narrowed in all directions, especially upward Six years before, the eye had been struck by a fragment of steel flying from the edge of a cold chisel This was followed by severe inflammation, which subsided in a few weeks, and *the eye had never been at all sore since* It was now free from undue tenderness or other symptom of inflammation The treatment ordered was applications of 1 1 to 120 solution of silver nitrate to the palpebral conjunctiva, and continuance of the atropia, with dark glasses Two days later the eye became decidedly worse He was confined to a dark room, atropia solution 1 to 60 was instilled every two hours, a saline cathartic was given, and he was put on the use of mercuric chloride and potassium iodide At the end of a week there was general hyperæmia of the eyeball The mass of the cornea was clearer, but there was slight keratitis punctata and distinct vitreous opacities, vision $\frac{12}{CC}$, great pain and photophobia I enucleated the right eye, finding it free from evidences of recent inflammation, but presenting in the ciliary region, below, a mass of lymph *the size of a split pea, in which was imbedded* a splinter of steel 3 mm long, and weighing between 2 and 3 grains The socket healed normally At the close of the operation, and still five hours later, the left eye was decidedly paler than before the right was excised The only change in treatment was the application of a blister to the left temple and the use of a drop of a 4 per cent solution of cocaine with each instillation of the atropia solution Next day the eye was worse, but after that it improved, and the patient is now thirteen months after the enucleation, working at his trade

Was this ophthalmitis due to the injury of the other eye, which for six years had given no evidence of active disease? In this case their was neither history, symptoms, nor collateral evidence to indicate syphilis or rheumatism It presented hyperæmia of the disk, serous iritis, keratitis punctata, vitreous opacities, plastic iritis, and repeated relapses What other symptom save the one under discussion could have helped to make the diagnosis more certain? Among the 211 cases collated in the report on sympathetic ophthalmitis made by its committee to the Ophthalmological Society of the United Kingdom in March of last year, twenty-three cases of this kind are included In four cases the intervals were eighteen, fourteen, ten, and eight years The committee say "Though the series is small, we may safely conclude from it that sympathetic ophthalmitis occurring after a long interval, and without any fresh inflammation of the exciter, is by no means likely to be mild" It may be questioned if the corneal ulcer and conjunctivitis had any necessary connection with the sympathetic disease Yet in three of the

cases which form the basis of the report mentioned corneal ulcer was noted and in one conjunctivitis Dr D Webster has reported as sympathetic a case of catarrhal conjunctivitis which had occurred in the service of Dr C R Agnew, and states that Dr H D Noyes had presented a case of sympathetic conjunctivitis to the New York Ophthalmological Society

The above points bear upon the diagnosis of sympathetic ophthalmitis Of equal importance are certain questions of treatment Atropin, I think, saved this eye from the baneful effects of posterior synechiæ The use of tonics was symptomatic Mercury was given internally on the strength of tradition, improvement occurred under its use, the relapse, running into plastic iritis, happened some days after its administration had been suspended Its local use caused no notable irritation, and was followed by rapid healing of the corneal ulcer But the most important point in regard to treatment is the question of removal of the exciting eye Here removal was followed by recovery In other cases recovery has occurred without removal Or, again, as in a case reported some years ago, by Dr A D Hall, removal has been followed by very great permanent damage or complete loss Referring again to the report above quoted, we find that of its cases the exciter was removed early in 64, of which 8 were lost, and it was removed very late or not at all in 65 of which twenty six were lost From their investigations that committee draws the very moderate conclusion, "that whether early removal of the exciting eye be positively useful in staying the disease or no, it is certainly not injurious, as no less an authority than Mauthner has asserted that it is when the sympathetic disease is of the 'serous' form"

Dr G Betton Massey presented

A RHEOSTAT, FOR THE UTILIZATION OF INCANDESCENT LIGHTING CURRENTS IN MEDICAL PRACTICE

The new building of the Orthopædic Hospital having been recently furnished with an incandescent lighting plant for which wires were laid throughout the edifice he determined to make use of the same current in the treatment of patients in different parts of the house in place of that derived from ordinary galvanic batteries To do this, it was necessary to use the current as it was delivered to the lamps in full strength from the entire secondary battery, as the many wires necessary to the use of a cell selector were out of the question The electromotive force of this current is only sixty volts, which is about equal to the full strength of an ordinary gravity battery of sixty cells or of a Grenet battery of forty five cells He had, therefore, merely to choose a rheostat or resistance medium that would be efficient with the full strength of any good chemical battery The wire rheostat was rejected for the double reason that it was expensive, and did not admit of delicate gradations, and the water tube, because it would have to be long to be efficient, and with the rod pulled up would be awkward in use

The rheostat exhibited, consists merely of a broad line of pencil mark on roughened glass extending around the greater part of a circle [1] One end of this broken circle of pencil mark is connected with a terminal of the battery, and the circuit is completed by a circular switch which makes contact with the pencil mark by means of a small metallic wheel A greater or less length of plumbago is thus included in the circuit with ease, and this material thinly spread out being a poor conductor, a great range of resistances is obtained In connection with the rheostat a milliampèremeter must always be used, the hand being on the rheostat and the eye on the meter With this rheostat and a meter attached to a battery all cell selectors may be dispensed with, and the whole battery used simultaneously and evenly The instrument was made by Mr Flemming, and is mounted with the meter on a ward table for use at the bedside Connection with the mains is made by thrusting a plug attached to the table into receptacles in the base boards near each bed in the wards, and beneath the lamps in the private rooms

Dr Massey also exhibited a

CHEAP, PERMANENT GALVANIC BATTERY

Its chief advantages are the cheapness of the materials used, its freedom from local action and creeping salts, and the long intervals that it will run without being touched It consists of a zinc rod, such as is sold for use in the Leclanché cell, clasped by rubber bands to a carbon rod, and resting in a saturated solution of chloride of ammonium and bichromate of potassium in simple water The carbon rod is one of those used in the arc light lamps, and, like the zincs, is both plentiful and cheap, one carbon rod broken in half serving for two cells The containing jar is an ounce quinine bottle Before attaching the wires to the carbons by winding and twisting, as shown in one cell, or by the pin and hole arrangement, as shown in another, the tops of the carbons must be treated with boiling paraffine to prevent interstitial creeping The elements are kept about half an inch apart by blocks of soft rubber The permanence of the cell is greatly improved by greasing the inside of the necks of the bottles and covering each with a piece of thin rubber to prevent evaporation Sixty cells give a strong and reliable battery, and the electro motive force is estimated at fully a volt per cell The total cost of the materials is only twelve cents a cell

FOREIGN CORRESPONDENCE

HEIDELBERG AND WURTZBURG [2]

Cicatricial Indications of Scientific Attainments, Their Scientific Aspect—Heidelberg Hospital—Carcinoma of Head of Pancreas—Carcinoma of Face—Riedinger's Method of Resecting the Knee—Schoenborn—Removable Plaster Splint—Sarcoma of Base of Skull—Iodoform—Leube and Naunyn

I left Stuttgart perfectly satisfied with the principal object of my visit and arrived in the famous

[1] A straight pencil mark rheostat was shown by Dr Jacobi to the American Neurological Society in 1885

[2] By permission of Drs Fenger and Senn

University town of Heidelberg April 6 I reached Heidelberg at the wrong time, as Easter vacation had commenced and Prof Czerny had improved this opportunity for obtaining a much-needed rest by a trip to the French metropolis I was very anxious to meet Czerny, not only to become personally acquainted with him and to see him operate, but also for the purpose of discussing with him certain topics in intestinal surgery which have engaged my attention for some time, and upon which I knew he could impart more information than any other surgeon

A look at the straggling students that remained during vacation must satisfy even the most superficial observer that the four years prescribed for study are not spent exclusively in the lecture rooms, hospitals and laboratories, or burning the midnight oil in boarding houses, as, almost without exception, they present a florid, healthy appearance not at all suggestive of hard mental work Every student wears his mark of honor, from one to twenty four scars indicative of the number of times he has been marked by his opponent in the defense of a real or imaginary question of honor As a rule, the left side of the face is disfigured, but when this has been converted into a checker-board incapable of receiving further impressions, it seems it becomes necessary to attack the other side, in order to increase the surface for recording the number of times he had met his man These scars are a study in themselves In size they vary from a mere scratch to a complete division of a cheek You can see recent scars, with an exuberance of granulation tissue and a high degres of vascularization, and the linear depressed scars of old veterans upon the field of honor, which have left the face in all stages of contraction and distortion Many of the faces, as far as looks are concerned, to the sight of an ordinary individual are maimed for life, but among students a man appears to be appreciated by the number of scars he can show These passports prove for him at all times and at all places that he has been a student, and as such they possess an intrinsic value One of the assistants in the hospital had so many marks that for the sake of curiosity I made repeated attempts to count them, but had to abandon the task as insurmountable as the counting of the stars of the firmament

From a scientific standpoint these scars present also interesting objects of study It is evident that the duels are not fought in an aseptic atmosphere, or that the wards have not been rendered properly aseptic, as all scars that I have seen seem to prove, from their size and ugliness, that primary union is the exception and not the rule I have come to the conclusion that the recipient of a wound under such circumstances is not anxious to obtain union by a minimal cicatrix, as such a thing might become invisible and he would have nothing to show externally in after life that he belonged to one of the learned professions Calculate, if you can, the time that is required to become the possessor of two dozen of scars Let us imagine that the assistant with countless scars had fifty genuine scars—and I am quite certain that this number is rather below than above the real figure—if he devoted to the acquisition of each wound and the subsequent healing process only one week, he spent one year out of the four prescribed by law in acquiring a scientific face That such students never wear the blue ribbon is well known, and it is safe to assert that the same individual with so many marks spent at least another year behind his beer-mug The much marked men seldom come to the surface in after life During my travels on the Continent I have scrutinized carefully the faces of prominent surgeons, and while some of them can show one or two, seldom more, decent scars, most of them have preserved the integrity of their facial integument during their student days, and devoted their time to nobler things It is a disgrace to the German government that the foolish practice of duelling, although forbidden by law is still tolerated If no other measure for the total suppression of this relic of the barbarous age can be enforced, I would suggest that double barrelled shotguns loaded with a handful of buckshot be introduced as weapons, and I can safely predict that duelling in Germany will soon have only a historical interest

Dr Bessel Hagen, Privat docent fur Chirurgie, and during Czerny's absence his representative, very kindly showed me through the surgical wards and explained the most interesting cases The surgical department of the hospital comprises four separate buildings, supplied with all modern improvements, and having a capacity for 200 beds The operating amphitheatre is a model of its kind, and affords ample room for 200 students Antiseptic precautions are carried out with scrupulous care Solutions of corrosive sublimate are used for irrigation, gauze compresses and sublimated wood-wool for dressing wounds Dressings are not removed for twelve days or more unless positive indications for an earlier dressing arise That antiseptic surgery is thoroughly practised in this hospital becomes evident from an inspection of the temperature tables, which show no material rise in all the cases which had recently been operated upon, and among them were many serious operations

A case of primary carcinoma of the head of the pancreas had been subjected to abdominal section for diagnostic purposes, but when the true nature of the lesion became evident by direct palpation, the wound was closed, as the disease had extended to adjacent organs The most prominent symptom in this case was profuse salivation

Dr Steinthal, first assistant, performed a very creditable operation on a woman 60 years of age suffering from a carcinoma of the face, involving the parotid region and external ear During the dissection it became necessary to extirpate the entire parotid gland Most of the branches of the facial nerve were dissected out of the gland and left intact The whole of the external ear was removed A number of the submaxillary glands which were found slightly enlarged were also removed The immense defect was covered by two flaps, one from the scalp and another from the side of the neck At a point corresponding to the external meatus a perforation was made in the flap Dr Hetzel, another assistant, made an amputation of the thigh in a boy suffering

from tuberculosis of the knee joint, and where a previous arthrectomy had been followed by a return of the disease, which involved the articular ends of the bones and surrounding soft parts to such an extent that this alternative furnished the only possible means to meet an *indicatio vitalis* Antero posterior cutaneous flaps were made, the end of the bone covered with a periosteal flap, all visible vessels tied before removing the constrictor, and after all hæmorrhage had been arrested, the muscles were sutured separately with catgut and the cutaneous flaps with silk, with the exception of two openings for bone drains Gauze compress was placed next the wound, and a large wood wool cushion as a covering for the wound

From Heidelberg I hastened to Wurtzburg, where I was more fortunate in finding the men I wished to meet, Professors Schoenborn and Riedinger, both teachers of surgery in the University In the evening Prof Riedinger called at the hotel and invited me to meet him at his private hospital next morning, to witness an excision of the knee joint after his method

The patient was a boy about 6 years of age, suffering from tuberculosis of the knee joint Evidently the disease was in its earlier stages, as the joint was only moderately swollen and did not present that sense of semi fluctuation as is the case in advanced fungus inflammation of this joint, at the same time the articular surfaces were not displaced The operation was performed as follows The whole limb was thoroughly washed with warm water and soap and subsequently with a 1-1000 solution of sublimate Esmarch's constrictor was applied about the upper third of the thigh, and a *longitudinal* incision made over the centres of the patella, dividing the tissues with one stroke down to the bone, and passing through the lower portion of the quadriceps and the tendon of the patella At a corresponding point the patella was sawn through in the same direction so that the divided patella and the soft parts presented two symmetrical halves which when separated exposed the joint fully to inspection, both by sight and touch Without much difficulty the lateral halves were so widely separated that the lower end of the femur was brought fully into the wound and the articular end was removed with a saw, the line of section being below the epiphyseal cartilage The tibial end was treated in the same manner At least two osseous foci were exposed by the bone sections, and each was carefully scraped out with a sharp Volkmann's spoon This long anterior incision fully exposes the upper recesses of the synovial sac, and renders the extirpation of the entire capsule an easy matter After the extirpation of the capsule with curved scissors the whole surface was irrigated with a sublimate solution and carefully dried, and the parts restored to their normal relationship, and the two halves of the patella tacked together by applying two catgut sutures passed through the tendinous covering and periosteum, but not through the bone

The only provision for drainage was a rubber drain introduced into the upper angle of the wound As the limb is kept in nearly perpendicular position for at least 24 hours, the drain occupies the most dependent position of the wound, and answers all requirements The remainder of the wound is closed with silk sutures A copious gauze dressing, embracing nearly the entire limb, is applied, over which a thick layer of absorbent cotton and equable compression by bandaging limb from toes to groin A posterior hollow splint, with foot board, serves to immobilize the limb The constrictor is not removed until the whole dressing is applied The first dressing is not changed for a week, when the drain is usually found outside of the wound As the wound at this time is usually firmly united, the sutures are removed and the limb put in a plaster of Paris splint Anatomically this operation presents a number of advantages I have always observed after making the transverse incision, that on account of muscular traction of the extensors of the leg, there is not only a tendency for separation of the fragments of the patella, but a constant traction always results in the formation of a wide and often ugly cicatrix in the skin, conditions which are avoided by the anterior longitudinal incision When the articular ends of the bones are brought fully into such a wound by forcibly flexing the leg upon the thigh, the entire synovial sac is brought into full view and rendered accessible to removal with scissors The tissues divided in the direction of the axis of the limb, serve a most useful purpose in securing immobilization during the process of repair

As Professor Reidinger states, this method of operation should always be resorted to in making an exploratory examination of the knee-joint, as in case further operative measures appear superfluous, the parts can be replaced and kept in contact by simple measures, and after the reparative process is complete the joint is anatomically in the same perfect condition as before the operation Professor Riedinger is firmly convinced of the utility and advantages of this operation over the ordinary method and resorts to it in all cases where arthrectomy or excision is deemed necessary, and is perfectly satisfied with the results obtained in a large number of cases

Hofrath Professor Schoenborn, well and favorably known as professor of surgery in the University of Konigsberg, has only recently succeeded the late lamented Prof Herman Maas Prof Schoenborn is only 47 years of age, and has left a splendid position and one of the best arranged surgical clinics in Germany, for a larger but more difficult field of labor The Julius Hospital in Wurtzburg is an immense institution, with a large material for clinical instruction, but the surgical wards are miserable, and the Government is not disposed to make any changes for the better The operating room is small and badly supplied with light If I remind you that Wurzburg has 1100 medical students, it is not strange that the new professor of surgery is sadly conscious of the defects of his clinic At the time I visited Schoenborn I found him happy in the presence of Prof Naunyn, one of his former colleagues in Konigsberg, who had come with his wife to pay his friend a visit

I was shown all cases of interest in the surgical wards and for the benefit of visitors, a plaster-of Paris

splint was made, which has been used for such a long time in the Konigsberg klinik, in the treatment of fractures, and for immobilizing joints It is the well-known anterior or posterior splint made of fibres of hemp impregnated with plaster of Paris paste, and accurately moulded to the parts until the plaster has set It makes an excellent removable permanent splint, and certainly is much preferable to the most ingenious and costly ready-made splints Another specialty of Schoenborn's is the removable water glass splint, which is much more durable and lighter than circular plaster of Paris splints, and is used extensively in the treatment of spondylitis and in flamed joints

The same day he removed a sarcomatous tumor from the base of the skull, through the mouth, after first dividing the soft palate As a preliminary measure the trachea was opened and plugged with a Treudelenberg's canula After the removal of this tumor the wound in the soft palate was closed with sutures The trachetomy pipe was allowed to remain 24 hours for fear that the wound secretions from the pharynx might enter the trachea and produce a pneumonia

Schoenborn is no longer a believer in the antiseptic properties of iodoform, as he has seen the staphylococcus aureus grown luxuriantly upon a culture containing this substance He attributes to it, however, other valuable properties, which act salutary in the process of wound healing, the most important one being that it keeps the wound dry, and in doing so acts indirectly as an antiseptic

In the evening I met Professor Leube and Professor Naunyn at Professor Schoenborn's house, where dinner was served, and a variety of wines sampled German professors, when behind the official curtain, appear to enjoy life as well as the average man outside of the medical profession If Professor Leube is so liberal in diet with his patients as he was with himself that evening, he would experience some difficulty in emptying their stomachs, even seven hours after mealtime The old saying, that "preaching is easier than practice," was verified on this occasion, and we left the house of our pleasant host and hostess, feeling at peace with ourselves and the entire outer world, and conscious that we had spent a most interesting and pleasant evening In my next letter I expect to give you a description of how to cure surgical tuberculosis à la Koenig N SENN

MISCELLANEOUS.

EBERTH'S RODS IN TYPHOID STOOLS —In the *Vratch*, No 22, 1887, p 438, Dr G O Shpolansky, of the Odessa Town Hospital, writes that he and Dr N A Stroganoff, prosector of the same hospital, have examined bacterioscopically stools in 96 cases of enteric fever, with the object of solving the following two questions of paramount practical importance 1 Whether Eberth's microbes are present in all cases of the disease or not? and 2 Whether the microbes are still present in the stools of convalescent patients? The main outcome of their researches may be summarized thus The typhoid bacilli were found in 90 of 96 cases Of those examined, 88 recovered and 8 died In one of the latter no bacilli could be detected in the stools during life In one of three convalescent patients examined no bacilli were found after the temperature had finally returned to the normal range In the remaining two the microbes were still daily discovered for nine and fifteen days respectively after the defervescence In view of the facts stated under the first head, a bacterioscopic examination of the stools should be undertaken in every case where any suspicion as to typhoid fever may arise, and in consequence of those adduced under the second, the stools of the patients recovering from enteric fever cannot be considered innocuous for at least fifteen days after the defervescence —*British Medical Journal*, June 25, 1887

THE ENGLISH PASTEUR COMMISSION —The report of the Committee on Hydrophobia has been recently issued It contains experimental and other evidence which strongly supports the theoretical views of Pasteur and their practical application

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U S ARMY, FROM JULY 2, 1887, TO JULY 8, 1887

Major Wm S Tremaine, Surgeon, ordered for examination by Army Retiring Board, at Governor's Island, N Y Harbor S O 151, A G O, July 1, 1887

Capt J O Skinner, Asst Surgeon, granted leave of absence for four months, on surgeon's certificate of disability S O 151, A G O, July 1, 1887

First Lieut H S T Harris, Asst Surgeon, will be relieved from duty at Ft Ringgold, Tex, upon the return of Asst Surgeon W T Carter, and will then report to commanding officer at Ft McIntosh, Tex, for duty S O 73, Dept Texas, June 27, 1887

Capt Geo T Beall, Medical Storekeeper, granted four months' leave of absence S O 150, A G O, June 30, 1887

Capt A V Cherbonnier, Medical Storekeeper, directed to take charge of office and perform duties of acting Asst Medical Purveyor in St Louis, Mo, during absence on leave of Capt Geo T Beall, Medical Storekeeper, now performing those duties S G 150, A G O, June 30, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING JULY 9, 1887

Medical Inspector A Hudson, detached from the "Trenton" and wait orders

Medical Inspector W K Scofield, ordered to relieve Medical Inspector Hudson on the "Trenton"

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE WEEK ENDING JULY 2, 1887

P A Surgeon S T Armstrong, relieved from duty at Marine Hospital, Memphis, Tenn, ordered to Marine Hospital, New York, N Y June 27, 1887

P A Surgeon C T Peckham, relieved from duty at Marine Hospital, Wilmington, N C, ordered to Marine Hospital, Memphis, Tenn June 27, 1887

P A Surgeon A Glennan, ordered to revenue cutter "Crawford" for temporary duty June 30, 1887

Asst Surgeon S D Brooks, ordered to examination for promotion June 27, 1887 Relieved from duty at Evansville, Ind, ordered to Marine Hospital at Wilmington, N C June 27, 1887

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ORIGINAL LECTURES.

INTRA-UTERINE THERAPEUTICS

Delivered before the Section on Obstetrics and Gynecology, at the Thirty eighth Annual Meeting of the American Medical Association held at Chicago, June 7 10, 1887

BY W S CALDWELL, M D,

OF FREEPORT, ILL

There is no subject in the whole domain of medicine that one approaches with more hesitation than the one to which I propose to call your attention for a short time to day In the treatment of every organ of the human body, and in the management of every disease in the nosology, we as doctors are proverbially at variance, but in the therapeutics of no other portion of the human body do we stand at such antipodes as in that of the intra uterine surface Some of our best writers regard the whole inner surface of the womb as a forbidden ground, to be avoided entirely, while others treat and manipulate it as they would any other portion of the body

Perhaps I shall not be able to say anything new, or advance a single idea not already known to day, but having spent four years of the last twenty in Europe looking after what pertained to my profession, perhaps a report of my observations gained in this manner, together with thirty years' personal experience, may embody some facts that will repay you for the time I shall occupy your attention

Among the most indelible impressions which I received as a part of my early medical education, and which influenced my practice in a marked degree for the first decade after I began active work, was the horror of the use of the obstetrical forceps, and a fear of the introduction of an instrument of any kind into the uterine cavity To say that I can count a score of mothers and twice as many children whose lives were sacrificed as a result of my early fear of the forceps, is no exaggeration, and while a revolution in this domain of medicine has well nigh swept over the entire professional mind, and perhaps carried us too far in an opposite direction, I am convinced that a great majority of physicians of this country and of Great Britain hold the intra uterine cavity in such profound awe that a large number of women are allowed to live a miserable existence, and are perhaps consigned to a premature grave, on account of the teachings that our best men gave a few years ago, and which are now held as orthodox ideas by many of the leading men who practice medicine in English-speaking countries to day

To sound the sentiment of the profession on the subject of intra-uterine medication, I issued, early in April last, 200 circulars, and sent out to the leading members of the profession throughout the United States, propounding the three following questions

Question 1 —Under what circumstances do you use an intra uterine injection *immediately* following delivery in child birth, and what medicine do you use, and of what strength?

Question 2 —In the puerperal processes following child birth, do you use intra uterine injections, and if so, what are your indications for the use of the same, and what remedies do you use?

Question 3 —Are you in the habit of using the curette, intra uterine injections, or other forms of medication to the intra uterine surface in diseases of the womb not immediately following child birth, and not connected directly with child-bearing?

To these questions I received over one hundred replies More than one half of those who answered say that they never use intra uterine injections of any kind, or under any circumstances

Prof Parvin says *First* In post partum hæmorrhage, whether primary or secondary, hot water uterine injections constitute one of the most efficient means of treatment, these injections are not necessary in the majority of cases, but in some they are

Second In case of retained placenta, whether adherent or not, but in which it is necessary to introduce the hand into the uterus, an antiseptic uterine injection should follow, such injection ought likewise to be used after the removal of a dead and decomposing fœtus In all cases where the hand is passed into the naked uterus, I mean the organ after complete delivery, as is necessary in some cases of post partum hæmorrhage, I should subsequently wash out the uterus with an antiseptic solution

The occurrence of puerperal septicæmia is an unequivocal indication, in my mind, for antiseptic injections in the uterus, these injections being usually 1 to 2000 (corrosive sublimate and water), and repeated twice in the 24 hours, a Bozeman catheter being employed, in some cases I use a 5 per cent carbolic acid solution If the uterus does not contract fully under the injection so as to chase out the corrosive solution, I compress it, and I also wash out the vagina with sterilized—that is, boiled—water, so that practically none of the solution remains either in the uterus or in the vagina for slow absorption, as

before taking this precaution I have seen some cases of mercurial poisoning follow such injections When temperature and pulse fall I cease the injections It is a terrible mistake to wait until the lochial discharge becomes offensive, or to first try merely vaginal injections Strike the evil in its abode and in its beginning by antiseptic intra uterine injections, and I believe almost every case of puerperal septicæmia can be certainly and promptly cured, and usually without employing constitutional treatment to any great extent, antiseptic injections into the uterus constitute the causal, the essential treatment of the disease

The curette, or Emmet's curette forceps, I have had occasion to use in many instances of incomplete abortion in the early months, most of the cases of menorrhagia or metrorrhagia consequent upon disease of the endometrium that have come under my care, have had their origin in an abortion Nevertheless, there are other cases Some years ago I had the terrible pain of seeing a patient die from an intra uterine injection of an iron solution given to arrest the hæmorrhage from fibroids, and I have never since used such injection except in the puerperal uterus Local liquid applications, as of iodine, carbolic acid, and other solutions, I have frequently made to the cervical canal and to the uterine cavity, and believe such treatment should not be abandoned

Dr DeLaskie Miller says *First* I never advise intra-uterine injections immediately after delivery merely because the labor is completed Hot water injections are sometimes useful in post-partum hæmorrhage

Second In septicæmia with offensive discharge, carbolized water

Third I use the curette when hæmorrhage or unhealthy discharges are caused by disease of, or by growths from, the endometrium

Dr Paul Mundé says *First* Injections of ice-water and vinegar in certain cases of post-partum hæmorrhage It is usually proper to wash out the uterus after the birth of a macerated child or an operation which has necessitated the passage of the hand or instruments into the uterine cavity

Second In cases of puerperal fever where the infection can be shown to proceed from the uterus, or where fever follows the birth of a macerated child, or operative procedures in which the hand or instruments have been introduced into the uterine cavity, where there is a fetid discharge which persists in spite of vaginal douches, where the uterus is large and flabby, or where we have reasons to suspect the presence of decomposing bits of placenta or membrane within its cavity The fluid used may be boiled water, or a 1-10,000 corr sublimate solution

Third Yes Chronic endometrites, uterine hæmorrhage, subinvolution or hyperplasia, intra uterine vegetation or malignant disease, defective development Means used are the curette, astringents, styptics, caustics, electricity

Dr W H Byford says In answer to the third question I do not use injections into the cavity of the uterus in non puerperal cases I use the dull curette in granular degeneration of the mucous membrane attended with menorrhagia

Dr C D Palmer says *First* I do not condemn all intra-uterine treatment Think highly of it at times, but do not use it so often as I did in former years

Second Use intra uterine injection immediately after delivery, when child is dead, putrid, and at times after intra uterine manual or instrumental manipulation Use bi delinde 1 8000 or carbolic acid one-half of one per cent solution

Third Use intra uterine injection after delivery when septic symptoms are present or threatened, and have reason to believe cause is within uterus Use curette and intra-uterine medication (not injection), for chronic intra-uterine diseases The former more often than latter

Dr H J Garrigues says *First* When it has been necessary to introduce fingers, hand or instrument inside of the uterus

Second In case of a macerated fœtus I use 1 to 4000 bichloride of mercury solution, using two or three pints In answer to your second question I would say I use injections in case of sepsis, especially puerperal diphtheria, I use 1 to 4000 bichloride, using two to three pints every 24 hours A pencil containing 100 grains of iodoform is introduced into the cavity after the injection, cauterization with the chloride of zinc, 50 per cent

About one fourth of my answers show that the parties only use intra uterine injections following labor to arrest hæmorrhage, using for this purpose hot and cold water, solution of perchloride of iron, zinc, iodine, vinegar, and the like

Some of the men who answered me must have been born under a lucky star, for several of them aver that during an extensive practice extending over a period of from twenty to thirty years they have never lost a patient from any puerperal process This certainly contrasts most markedly with my own experience, and while the results achieved in the lying in institutions of this country and Europe are most brilliant as far as the mortality to both mother and child are concerned, I am of the firm belief that in private practice there is still much to be accomplished before we have done all for our patients that our duty demands, and that the new lights shed upon this branch of medicine will enable us to do

Considering, first, the question of intra uterine injections following immediately after child-birth, we are informed that even as far back as the time of Hippocrates and Galen this procedure was resorted to as a means of combatting uterine hæmorrhage and to facilitate the expulsion of the retained secundines But this practice, like many others that were conceived and followed out by these eminent fathers in medicine, found but little favor in the ages that succeeded them, so we may say that this practice might be classed as one of the lost arts until revived in the latter part of the last century by Recobin He strenuously advocated the use of cold water as an intra-uterine injection in cases of retained placenta or violent hæmorrhage Levret and Baudelocque were also warm advocates of this practice But all uses made of intra-uterine injections, up to the lat

ter half of this century, were designed mainly to act mechanically or simply as an astringent to arrest the flow of blood Not until the last half of the present century, when the germ theories of Pasteur and Koch, and the antiseptic precautions advocated by Mr Lister, had gained a foothold in the minds of the profession, do we find any definite plans given to guide us in the use of injections into the uterine cavity

Well do I remember a generation ago being counseled by the same man to always leave my forceps at home, for fear of being tempted to use them too early, teaching me at the same time that puerperal fever was a zymotic disease in no way communicable, and ridiculing all doctrines as to its contagious character

Semmelweis, in May, 1847, announced the doctrine of the identity of child bed fever with other pyemic processes, and recommended the hands to be washed with chloride water, and afterwards on account of its cheapness the chloride of lime (10 oz to 2 lbs of water), as a disinfectant This, I believe, is the beginning of what has developed into our modern antiseptic idea of the management of child birth

Retzius, at Stockholm, in 1849, to prevent the spread and development of the puerperal processes used astringent injections, *per vaginam*, touched the abraided surfaces of the same with tincture of iodine and used nitrate of silver in strong solution as an intra uterine injection In 1855 Braun and Spaeth both recommended the use of a strong solution of alum in the womb in case of fever following birth, and where there was a foul discharge In 1871 Mayhofer found in the fœted lochia of patients suffering from child-bed processes vibrios, which he believed to be the specific germ that caused the disease These he cultivated in an ammoniacal solution, and injecting them into the genitals of the female rabbit, the animals died of the symptoms and with the lesions found in the human subject Later Waldeyer, Orth, Heiberg, Spillmann, and others, made investigations confirming these experiments In 1877 M Pasteur communicated to the Academy of Medicine, of Paris, his investigations as to the specific character of the microbe of puerperal fever, and while he and other observers recognized certain forms of microorganism that accompany the suppurative discharge in the ordinary cases of child bearing, these latter forms of organic life produce no profound symptoms upon the constitution of the patient, and were never found in the general mass of the blood itself On the other hand, the true materies morbi of genuine puerperal fever was always found in the circulations, thus producing a series of most profound constitutional disturbances The world over Mr Lister is recognized as the father of antiseptic surgery It is in Germany that one finds Listerism practiced with the minutæ and detail that puts far in the back-ground anything that the father of antisepsis practices to day at Kings College Hospital As a proof of this you would only have to witness the surgery of Bergmann, at Berlin, or Volkmann, at Halle

Laying hold of this new theory as to the nature of all puerperal processes with the avidity that characterizes the German race, we find for a decade that antiseptic intra uterine injections were not only used as a means of combatting the morbid processes following child birth in nearly all the German hospitals, but that every woman who gave birth to a child had her uterus washed out as a prophylactic measure to prevent the possibility of her becoming infected by the germ that this precaution was intended to destroy Experience, however, soon demonstrated that this practice was not a judicious one, and that interference where no morbific symptoms were present was not warranted

In 1882 Dr Fischel published a lengthy article giving the results of experiments made on a large number of lying in women in the wards of Prof Breisky, in Prague The result of these observations went to show that when intra uterine therapeutics were used as a prophylactic agent in all cases of child birth, the results were less favorable than where they were not used at all But after limiting their use to such cases as were attacked with symptoms of child bed fever, viz increase of temperature and pulse frequency, he reduced the mortality of septic fever in child bed to 0 21 per cent With Breisky the whole subject of intra uterine treatment rests upon the theory pretty generally accepted to day of the germ theory of the different puerperal processes, and the infection of the parts through the channel of open wounds, by means of germs contained in the atmospheric air He says that such have been the brilliant results of this new treatment, that the cases observed by the older practitioners and recorded in the books, where, in spite of all treatment, the patient sinks and dies within a few days of an overpowering and generally diffused septic process, are now almost never observed, and are unknown in the practice of the younger members of the profession

Starting out with the proposition that we may do harm with our treatment if improperly used, the rule laid down is this that, while many patients who have a temperature of 38° or even 40° C may come out all right, yet our observation teaches us that we can never depend upon such a result, and that we often see cases that begin very mild, but have repeated chills, and finally die of a septic process in spite of all that can be done for their relief Therefore, when the temperature rises to 38 2° we should interfere

Among the important points to be noted in the use of local antiseptics in child bed fever is, first, if possible, to determine at what part in the genital track the *materies morbi* gain access to the system This cannot always be done, but, as the vagina must be the channel through which all foul matters pass out, we should render this perfectly aseptic A failure to do the work well will often be observed in a case like this A patient has a foul smelling discharge from the vagina To remedy this, though the patient has no fever, you use an ordinary vaginal injection or direct a nurse to do so At once your patient is taken with a chill, and a high fever follows How is this to be explained? Soon after confinement nature throws out on the abraded surfaces a layer of plastic lymph You have washed this away, and rendered these

surfaces tenfold more liable to absorb morbid products than they were before If you use an injection at all, do so most thoroughly Hunt out the abraded surfaces on the vagina and apply, after drying them thoroughly, tincture of iodine, which is one of the best known antiseptics, for, while it produces no ill effects upon the tissues, it renders them free from the liability to absorb the secretions

In the matter of intra uterine injections, if you use an injection strong enough to kill the organic germ, and remove at the same time all débris from the uterine cavity, it is not necessary to repeat the same For this purpose Breisky uses a 5 per cent solution of carbolic acid, or a strong solution of chloride of lime But the principal danger from intra uterine injections is the liability of carrying with your tube foul matters from the vagina into the uterus, and hence the absolute necessity of disinfecting the vagina as a primary step in the operation

Dr E Ehrendorfer, assistant to Prof Spath, in Vienna, began in 1881 experiments in the intra uterine use of iodoform in child bed He begins his article, entitled "Ueber die Verwendung der Iodoformstabschen bie der intra uterine Nachbehandlung in Wachenbette," with the remark that, although iodoform has long been recognized as one of the best antiseptics in surgery, its mode of application to the uterine surface was a difficult problem *First*, the introduction of the powder into the womb was a difficult process, then again the use of a suppository of cocoa butter was a partial failure on account of the rapidity with which the menstruum was dissolved, and its consequent rapid passage out of the womb and vagina To circumvent this difficulty a bacillus (suppository Stabschen, as the Germans call it) was made after the following formula

Iodoform	grms 20
Gum arabic	
Glycerine	
Amylum pura āā	200
Make 3 suppositories	

The manner of using these was first to wash out the uterus thoroughly with a 2 per cent solution of carbolic acid, and then, after the womb is well contracted, to dip the Stabschen in a solution of carbolic acid, grasp it with a pair of curved forceps, and, using two fingers of one hand as a guide, to pass it into the womb The indications for the use of this agent are first, after all operations that require the introduction of the hand or any instrument into the uterine cavity *Second*, it should be used in every case in which there is a rise of temperature after child birth, if it be evident that such increase of bodily heat has its foundation in a morbid process originating in the womb

Some of the most brilliant results from the use of iodoform as an antiseptic in uterine surgery I saw illustrated in the service of the lamented Prof Schroeder, of Berlin, during the past year I saw in one case an intra uterine fibroid weighing four pounds, and another of two pounds, removed *per vaginam* These masses were not pediculated, but occupied a large part of the intra uterine surface, and had to be cut away piece meal, the operation lasting from one to two hours, and yet both these patients recovered without any profound constitutional disturbance When I contrast these results with my own experience, having lost two patients when this operation was much less formidable, and that evidently not from any special violence done to the womb itself, or to the surrounding organs, but from a septicæmia that followed, it has produced a firm conviction in my mind of the value of this agent as an antiseptic in this domain of surgery

Much discussion has arisen of late as to the likelihood of the occurrence of iodoform poisoning when this drug is applied to the uterine surface The drug had been used during a period of two years when I was last a student in the lying-in hospital in Vienna. Dr Ehrendorfer says that when even as much as 10 grains of it was used in a single Stabschen, he never saw any toxic effects manifested Konig, after a long series of experiments, says that he never saw iodoform poisoning occur when less than 10 grains were used Kowalski, in a paper lately read before the Vienna Medical Society, says that he has tried this agent in 326 cases as an intra uterine application, without a single case of poisoning from the drug He used it besides, as an experiment, upon his own person, and found that when he took no more than 6 grains in the twenty-four hours, no intoxication occurred, but even a much smaller dose caused toxic effects if long continued, showing the drug to be cumulative in its action

To illustrate the manner of managing a not infrequent class of cases in midwifery, I copy the following history from my notebook A woman, 40 years of age, was brought into Carl Braun's wards at 10 A M, August 15, 1886 She had had some uterine pains, and had flooded profusely for twenty-four hours before her entry Examination showed a partial placenta prævia, but, as she was not losing blood very rapidly, it was thought best not to interfere except to wash out the vagina and assist uterine contractions by massage The fœtal heart could not be heard Her temperature on admission was 38 2° C At 11 P M it was 39 5 At 6 A M, August 16, the child was delivered by version, dead At this time her temperature was 41°, and for this reason was interference resorted to, not on account of loss of blood At 7 A M she was placed upon the table, the vagina first well washed out with a bichloride solution, 1 4,000, then the womb irrigated with the same, then the uterine surface well scraped out with a large blunt curette bringing away some shreds of membrane and some clots The womb was now again irrigated with the mercurial solution, 2 litres being used, and following this the organ was washed out with a solution of thymol, 1 1 000, the iodoform Stabschen carried into the womb and the patient put to bed At 7 P M, twelve hours later, her temperature had fallen to 37 5°, and at 11 P M was only 36 6°, and from that time on the patient made an uninterrupted recovery I watched this case with great interest for I remembered when a student of Braun's in 1878 having heard him say that if a woman's temperature *rose to* 40° C within twenty-four hours after her delivery, she would *positively* die, for the reason that it showed

an ante partum infection, to which he claimed the patients uniformly succumbed The brilliant result in the case just cited shows how antiseptic intra uterine treatment has revolutionized all this

To illustrate the management of another case I will draw again from my note book A poor woman living a distance of fifty miles from Vienna was taken in labor with the complication of an arm presentation Physicians near by made an ineffectual effort at version, but not succeeding, they dispatched her by rail to the lying in wards of Karl Braun When brought in for examination it was found that the abortive attempts at turning had resulted in a laceration of the cervix up to the body of the uterus and within the narrowest limits of the peritoneum itself From this the poor woman had bled until she was almost *in extremis* Braun's blunt hook was used to decapitate the child—which was already dead—and delivery was effected without great difficulty The parts were disinfected by the injection into the vagina and uterus, of a 5 per cent solution of carbolic acid, followed by a 1 1000 thymol injection

The laceration in the womb was brought together by three silk sutures, the iodoform Stabschen was introduced and the woman put to bed Though extremely exsanguinated this woman made an uninterrupted and excellent recovery

The point I wish to make is this, and bring these two cases to illustrate my idea, that where intra uterine injections are used after delivery because it has been found necessary to institute any manual or instrumental procedure, and where there is no evidence of an ante partum infection manifesting itself, by an increase of temperature and the like, it is not necessary to resort to the bichloride of mercury injections but it is better to use either a 5 per cent solution of carbolic acid or a 1 1000 thymol injection, using the iodoform Stabschen in either case after the injection

Coming now to the consideration of the second question in my circular, that is, under what circumstances should we use intra uterine injections in the puerperal processes, and what should we use? They should be used, as I have intimated, whenever the temperature rises to 38 5° and where such rise is evidently caused by some morbid process going on in the genital track That the bichloride of mercury should be used not stronger than 1 4000, that usually the blunt curette should be used to remove any portion of membrane or clots, that the mercurial solution should be again repeated, and then the womb washed out with simple hot water or thymol solution to wash away any redundancy of the corrosive sublimate The iodoform Stabschen should be used as a last part of the operation, whatever solution is used as the injection

Now, if this work be well done its repetition is generally unneccessary I must take issue with some of the best men who answered my circular—and some of them are the best authorities in the United States—on this point, many of them recommending the repetition of the bichloride solution as often as two or three times a day for days together This I believe to be a dangerous procedure unless great care be used to wash away each time any redundancy of the mercurial solution Again, these repetitions are unnecessary if they are used early and are well used

If your local treatment be not followed by an amelioration of the constitutional symptoms, you may be assured that the process has passed beyond the limit of a local one, and has become a generalized infection over which your antiseptic local treatment will exercise no influence

In passing to the consideration of the third division of my subject, viz, the application of medicines to the inner surface of the womb at a time not connected with child bearing or immediately following that act, I will not attempt to even give a *resume* of the different agents that have been used for this purpose, or of their mode of application, but will discuss the question mainly in connection with the use of the curette and certain adjuncts as a part of such treatment

Here we enter a field where the profession are even more at variance than in the matter of intra uterine medications in child birth and the diseased processes immediately following that act In perusing the works of some of our best authors on gynæcology one is struck by the fact that, while they recommend the greatest caution in the use of the uterine sound, they do not hesitate to advise the swabbing out of the uterine canal with pure tincture of iodine, carbolic acid, nitric acid, and the dropping in at hazard upon this delicate surface portions of pure nitrate of silver of considerable size To my mind this inconsistency is easily explained For instance, that man whom you will all recognize when I say that he is the greatest authority on gynæcology, living or dead, of this or any other country, tells us to use the uterine sound without a speculum and without giving us any directions as to the disinfection of the vaginal track before its use Now what is one of the accidents that may follow this simple procedure, even if done with the greatest care? It is the carrying into the uterine cavity of organic germs that are likely to be found in the vaginal track and thus setting up of a morbid process from bacterial infection Has not nearly every one who listens to me had an experience something like this After a severe labor you find it necessary to use the catheter on your patient one or more times From this time on the woman is troubled with frequent micturition, vesical tenesmus and the like Examine her urine with a microscope and what do you find? It is loaded with bacterial germs How now did they gain access to the bladder? They were carried there by your catheter from the vaginal walls In the same way you are likely to carry these bodies from the vagina to the uterine cavity through the medium of your sound

Therefore, you should never use the catheter in the female without first cleansing the parts with which your instrument comes in contact, and should never introduce a uterine sound or any other instrument into the womb until you have first thoroughly disinfected the vaginal track

I believe, also, that if this canal was thoroughly disinfected before the use of the obstetrical forceps, many of the accidents that follow such operations

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would be obviated Récamier, who introduced the practice of curettage, into France, was followed by many warm disciples both in that and other countries To scrape out the womb was in fact the rage for a decade or more The great Nélaton caught the infection, and operated on a large number of women, until two of his patients died as a result of the operation From this time on he abandoned a procedure that he became convinced was eminently dangerous to life Prof Gilleau, of Hôtel Dieu, himself a pupil of Nélaton, inherited a strong prejudice against this instrument from his old master, and yet I have seen him use it with a boldness that would almost rival the practice of Martin himself In a clinical lecture on this subject he says "The whole question of the safety or danger of the operation hinges on the point as to whether you perform it perfectly antiseptically or not"

I have been a pupil at three different times of Martin's, in Berlin, and when I saw him first scrape out, wash out and treat the uterine surface in the manner in which he does I felt a feeling of horror run through me akin to that which one would naturally experience at seeing an operation performed that was considered most likely to result in the death of the unfortunate patient Some years elapsed after seeing these operations performed, during which time I saw treated a large number of gynæcological cases, but it was not until I had seen them frequently repeated, and was able to see some of the good results following their use at my last visit to Berlin, that I became an advocate of the practice My confidence in the treatment had its foundation in the conviction that its dangers were averted by the observance of the most perfect antiseptic precautions, and since my return from Europe this spring I have treated several cases with apparently the most happy results

Having determined to institute our intra uterine treatment, among the first questions presented as a preliminary step in the procedure is the necessity or advisability of using some means to dilate the uterine canal In a vast majority of cases I hold mechanical dilatation to be unnecessary The failure to get an instrument into the womb does not usually arise from a narrowing of any part of the track but from a deviation in the direction of the canal in some part of its course To overcome this it is only necessary to catch the anterior lip of the womb and produce sufficient traction to straighten the channel I show here the very ingenious manner of practicing this maneuver by the late Prof Bandl

If it be necessary to dilate the womb, I believe that it is generally better and safer to accomplish this by using Hegar's dilators than by any form of tent, on account of the liability of the use of the latter to be followed by septic infection

Having spoken of the use of the curette and its dangers, we come now to the subject of intra uterine injections in general gynecological practice Among the possible dangers that may complicate this operation is the passage of the fluid used through the Fallopian tubes into the peritoneal cavity That the dangers of this accident have been greatly exaggerated I am well convinced In a paper read before the Scientific Congress of France at Havre, in 1878, Prof Gallard demonstrated that the fears that we have entertained as to the entrance of fluids injected into the uterus via the Fallopian tubes into the peritoneal cavity are entirely unfounded In a series of experiments it was shown that in the cadaver it was not possible to force water into the uterus with sufficient force to cause it to enter the peritoneal cavity without first tying the canula used firmly in the cervical canal by passing a ligature around the neck of the womb Gallard says that the size of the internal os may be fixed as that of a No 12 Charriere, and therefore if we use a No, 10 no danger can arise Dr Braun's instrument, which I show you, I consider the very best one for this purpose, as it differs from that of Bozeman by having the channel of exit several times larger than that by which the fluid enters the uterine cavity No syringe should be used as a means of forcing any fluid into the womb, but an irrigator, in which the pressure can be most accurately regulated by the height to which you raise your reservoir As a preliminary step I would always advise the washing out of the womb with some antiseptic fluid before the use of the curette

While the curettage of the inner surface of the womb for the relief of obstinate hæmorrhage, and for the removal of retained portions of the secundines after abortion, is a well recognized and orthodox procedure, I believe that its application can be extended to a much larger field in well selected cases Take the case of a woman who has borne children, her womb measures from one half to one inch more than normal, there is no extensive laceration at either side of the cervix, yet the mucous membrane of the canal is eroded and everted around the entire cervical canal She has a profuse leucorrhœal discharge, and her menses may be either scant or profuse If I ask ten of the best men who listen to me how they would treat such a case, I would be likely to get ten different modes of management in answer to my question, and after following out each recommendation, I would probably find my patient but little better than when I began the treatment of her case The average man will never see anything in this case farther than the changes in and around the cervical canal, and his treatment is generally an entire failure, for the facts are that the entire mucous surface of the womb is diseased, and any treatment, to be successful, must be applied to this entire track The mucous follicles are immensely enlarged, and secrete an abundance of an abnormal secretion

In a case like this, if you will carefully use the curette to the entire intra uterine surface, removing these enlarged follicles, and then from time to time irrigate the womb with a mild astringent wash, you will be astonished to see what progress your case will make toward recovery If there be a considerable relative elongation and enlargement of the cervix I would perform, as a part of this treatment, the amputation of the lower portion of the cervix uteri

It is necessary, of course, before instituting any intra uterine treatment, to convince yourself that there is no fixation of the womb or a peri uterine infiltration that complicates the case Under e ther of

these conditions any manipulation of the organ may light up a latent diseased process, and be followed by consequences of a most unpleasant character

DISCUSSION

DR G A MOSES, of St Louis The paper just read, which so admirably states the present advanced stage of science for the proper treatment of women suffering from puerperal disease of septic origin, leaves scarcely anything to be said We must agree entirely with the propositions made by the gentleman, but I think it probable we are at extremes in some of the procedures advised For example, I can scarcely see the possibility of infection by the passage of the catheter, provided it be clean before introducing it into the bladder, on account of the slight contact with the parts which takes place The reason I refer to this is that I think we are disposed to attribute to the wrong cause inflammations which occur under these circumstances We should look deeper for the causes of diseases that are presumed to be conveyed to the parts by our carelessness, which I am satisfied is not always the case As regards the fear of conveying germs into the vagina by the use of forceps or any other instrument that may be necessary during labor, the vagina is from the beginning more or less filled with discharges which I take to be most thoroughly antiseptic, unless there has been some preexisting disease, and for the purpose of using the hand or instruments I cannot see that it is ordinarily advisable to douche the vagina with strong antiseptic fluids It has not been my practice, because I think there would be more harm than benefit Of course the strictest antiseptic precautions should be observed in regard to the hands, it would be criminal to do otherwise One other point in relation to the method of curetting, the value of this mode of treatment is undoubted, and I agree in the method of curetting and the instrument exhibited, which I vastly prefer for efficacy and satisfactory work to any of the so called blunt curettes Where it is necessary to remove any thickness of mucous membrane we may desire, I have never been satisfied with the slight work that the ordinary really blunt curette has done Where I wish to remove diseased membrane or affect the cause of inflammation, I prefer an instrument modeled something after the one exhibited—a hollow spoon, with which one can remove thoroughly all the diseased parts, and can, by withdrawal of the instrument from time to time, examine the parts which are removed As a matter of course antiseptic solutions should be used for cleansing the parts, and the after treatment following the curetting should be done in the manner described I agree with the gentleman that antiseptic douches for irrigation should be used at once and that no repitition is ordinarily necessary The employment of a too mild, or inefficient, or imperfect, irrigation is worse than useless, it is temporizing and encouraging disturbances which may prove fatal Therefore, a thorough irrigation of the puerperal uterus with a disinfectant solution should be used at first I think the author did well to impress upon us the necessity of the use of a comparatively innocuous wash after the injections of the stronger solution of sublimate If this is always done and we do not allow any portion of the sublimate solution to remain we will entirely avoid any of the mercurial poisonings which have been so frequently urged against the value of this method

DR H O MARCY, of Boston As long ago as 1881 I was heard on this topic Three years ago I reviewed the ground carefully I am glad to hear the paper, and I am also glad to hear the remarks of Dr Moses, that it is better never to do half heartedly this work I believe the greatest danger in antiseptics to day lies in half doing If there is a greater reason for reviewing this subject, it would be this If an antiseptic application is to be made to the uterine cavity the reason for its making is that the cavity is septic, and that is the reason why uterine injections ordinarily are to be recommended. There is no part of the body where the septic processes go on more rapidly It behooves us to be carefully on the watch I would like to emphasize the wisdom of the careful observation of the thermometer The moment that the temperature rises remember there is danger I would again emphasize this In all obstetric operations insure a clean vagina I believe the vagina is septic and there are always some germs in it If you find that there is danger, be sure you are thorough, hence the curetting and removal of these semi-decayed or necrosed portions of tissue we call septic It can be removed carefully, and then we have the condition of an aseptic cavity But remember, that oftentimes you will find the danger is beyond your local point and your septic fever is not less than the regions of the enemy passed beyond the uterine chamber

Again, in regard to the applications in the uterus in a non pregnant state, the curetting I believe to be not only very safe but very wise In the last twelve months I have curetted 100 uterine cavities, and probably more If we do this thing let us do it in a whole hearted, conscientious way, understanding the reason why we do it and understanding that we are safe if we use bichloride of mercury I have not the slightest objection to using a solution of 1 1000 in the uterine cavity, but I earnestly protest against any carelessness in this matter I have made use of iodoform year after year, and I have never seen a case in which I thought my patient was injured from either carbolic acid, bichloride of mercury or iodoform

ORIGINAL ARTICLES.

HAY FEVER

The First Prize Essay of the United States Hay Fever Association for 1887

BY SETH S BISHOP, M D,

SURGEON TO THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY TO THE SOUTH SIDE FREE DISPENSARY, ETC CHICAGO, ILL

The limitation placed upon the length of this essay is my apology for the incomplete manner in which the subject is treated Believing that those

for whom this is written will be principally interested in the cause and treatment of the disease, I have devoted most of the paper to the consideration of these topics

Pathology—Hay fever is a functional nervous disease No organic change has ever been found in the nervous system to which the peculiar suffering in this malady could be attributed The symptoms are manifestations of exaggerated functional activity

There are three factors which satisfactorily account for all the phenomena presented by a paroxysm of hay fever *First*, highly susceptible nerve centres, *secondly*, over sensitive nerve ends, and *thirdly*, the presence of one of a large number of exciting causes The conclusion that this is a functional nervous disease is a logical one, based on anatomical, physiological, pathological, and therapeutical facts Let us examine these *seriatim*

One of the centres of the sympathetic nervous system—the spheno-palatine ganglion—supplies branches to the lining membrane of the nose, throat, soft palate, and Eustachian tube It possesses a sensory, a motor, and a sympathetic root It is connected with the pneumogastric and facial nerves, and through its numerous connections an intimate sympathetic relation is established between the nose, throat, ear, larynx, and bronchial tubes Sympathetic, from the Greek words σύν and πα'θος, meaning suffering together, precisely expresses it Removal of this ganglion causes a severe catarrhal condition of the nasal mucous membrane This membrane is continuous with that which lines the nasal duct and eyelids, the throat, Eustachian tube, middle ear, larynx, trachea, and bronchial tubes A congestion started in one portion of this membrane may extend to other parts, as the inflammation in erysipelas may spread over the body

The nerve theory is not incompatible with the fact that a diseased membrane may be found in the nose after many recurrences of congestion of the parts through years of suffering Neither is it controverted by the excellent general health and superior intellectual endowment of this class of patients Mental workers, such as authors, physicians and clergymen, constitute this class, while manual laborers seem to be rarely affected I have met with but two hay fever cases in a dispensary practice affording opportunities for the observation of several thousand cases of various diseases, in a climate prolific of nose and throat affections

I will enumerate, briefly, several arguments in support of the nerve theory The nervous temperament of the sufferers, the hereditary character of the disease, the identity of its different forms, its similarity to asthma, its periodicity, and the surprising suddenness of its coming and going, the stimulant, tonic, and sedative character of the best remedies—nerve remedies, the effect of mental impressions and physical exertion in preventing and arresting attacks All these are suggestive of functional nervous derangement

Predisposing and Aggravating Causes—Heredity and the temperaments classed as nervous are, strictly speaking, the predisposing causes Broadly speaking, whatever diminishes the powers of resistance predisposes one to attacks Most foreign substances which are liable to come in contact with the nasal mucous membrane will provoke paroxysms, inasmuch as the mere contact of a polished silver probe will excite sneezing Dust, pollen, infusoria, dry hot air, cold, damp, or foggy air, smoke, gas, bright light from the sun, electric light, gas light, sunlight reflected from snow, etc, are prolific causes Much may depend on the character of the dust, for this is determined by the geological formation of any given locality So wide is the distribution of dust by the varying currents of the air, that places which would naturally afford immunity from this disease may be visited by storms of noxious foreign pollen A sea voyage is considered a certain cure for an impending attack, but even there the enemy may lurk unseen in the folds of the canvas or clothing, or in the upper currents of the atmosphere Darwin has shown that pollen has been wafted many miles over the Atlantic Showers of pollen have fallen hundreds of miles distant from its native soil Dust may be deposited in curtains, carpets, etc, and be retained for indefinite periods before finding lodgment in the respiratory tract The upper strata of the air may be laden with pollen, as it is at times with volcanic dust, which may be so dense as to darken the sky at great distances from the source of supply These truths illustrate the omnipresent and occult character of the exciting causes

The greatest suffering occurs from May to October, especially in the country, and for the following reasons *First*, at this season the air swarms with the fecundating dust of plants and flowers, *secondly*, the dry, hot air of the country is not moistened during the day except by occasional rains, *thirdly*, the dry surface soil affords the winds a never-failing supply of dust, *fourthly*, one is not protected from the dazzling brilliancy of the sun by tall buildings in the country as he may be while pursuing the avocations of city life The streets of cities are deluged with water in summer, the dust is laid, the air is cooled and moistened by evaporation Great buildings afford protection from the scorching rays of the sun The denser the population the less the vegetation, and the greater the relief to asthmatics and hay fever patients

I desire to lay especial stress upon the irritating effect of dry, hot air It causes great activity of the muciparous follicles, and imposes a heavy burden on the glands to pour out sufficient mucus to keep the membrane moist One must avoid dry heat from stoves and furnaces Much thumbed books and newspapers that are a little musty are exciting causes I have not seen mentioned

Advice to the Sufferers—Treatment—One may take a sea voyage, or visit the White Mountains, or one of the many other well-known resorts, or he must combat the disease with such weapons as our list of palliatives affords

A retreat which relieves one may not be free from all irritants which might affect another I have known places to be recommended as hay fever resorts where some patients suffered severely Mackinaw

and Petosky, Mich , the Lake Superior region, and the mountains of Colorado and California are favorite resorts Many asthmatics experience entire freedom from suffering by changing a country residence for one in the heart of a great city I have known the same change to greatly mitigate attacks of hay-fever, but if the smoke and soot from soft coal are obnoxious, one must avoid a neighborhood of factories, hotels and large restaurants, whose chimneys pollute the air with smoke

Another important preventive measure is the protection of the body from the vicissitudes of the weather Fabrics of vegetable fibre, such as cotton and linen, should not be worn next the skin Animal fibre, such as woolen or silk, favors absorption and evaporation of the perspiration, and keeps the temperature of the surface of the body equable It prevents chilling Woolen is preferable to silk, except in the hottest weather, when thick silk underwear affords more comfort and sufficient protection Another excellent precaution is to have garments brushed daily before wearing them, to remove all dust The air of sleeping and living apartments should be kept pure and moist, and not above 70° F in winter Plenty of sleep should be had The bodily temperature should be modified in hot weather by means of cooling drinks and ices The generous use of these before retiring will reduce the temperature and avert attacks In cold weather the body may be heated and bathed in perspiration by means of a cup or two of hot, strong coffee I have repeatedly observed this simple remedy avert attacks of hay fever, as well as of asthma A glass of wine subserves the same purpose Coca wine has an additional exhilarating effect, but great circumspection must be exercised in recommending these nerve remedies Unfortunately, it is with this class of medicines that pernicious habits are established It is by these nerve stimulants, tonics and sedatives that we conserve and increase the powers of resistance, combat exhaustion, and soothe irritability of the nervous centres

Remedies to prevent enervation should be taken before and during the periods of suffering The most reliable in this class are quinine, iron, strychnine, arsenic, phosphorous, caffeine, and electricity Grindelia robusta has proven so unsatisfactory in my experience that I cannot indorse it In that form of hay fever where there is active or passive congestion of the brain, ergot is indispensable Bromide of soda, for the same purpose and for its tranquilizing effect on the irritable nervous tissue, is preferable to bromide of potash, in that it contains a larger percentage of bromine, is less vitiating to the blood, and is less disagreeable than the potash

It is obvious, from the nature of these medicines, that they should be taken only under the directions of a physician

These remedies suggest the blending, like prismatic colors, of the subjects of preventive and

Palliative Treatment —Quinine in tonic doses may not only prevent attacks, but will greatly mitigate them if taken in doses of two or three grains every two or four hours during the day But quinine in large and continuous doses produces congestion of the middle ear, and probably of the auditory nerve I have had many cases in which there was no room for doubt that it caused permanently impaired hearing and subjective noises The bromides are not less useful during than previous to attacks They not only soothe the irritable nervous centres, but induce refreshing rest—

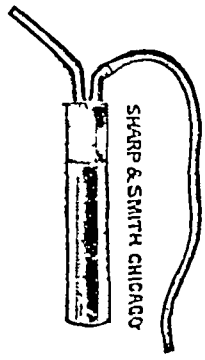
Tired Nature's sweet restorer balmy sleep "

Chloral hydrate alone, or combined with bromide, in bromidia, is more certain still But the dangerous character of chloral, and the peculiar ill effects of both drugs, forbid their indiscriminate use

Better than all other drugs in my experience has been a happy combination of morphia and atropia in easily divisible compressed tablets Not more gratifying results could be expected from palliative medication than I have obtained from this For several years past I have rarely employed morphine in my practice without administering atropia with it, believing that the antidote should go with the poison. The relative proportions which have proved so satisfactory are $\frac{1}{300}$ grain of atropia to ⅛ grain of morphia, $\frac{1}{150}$ grain of atropia to ¼ grain of morphia, $\frac{1}{100}$ grain of atropia to ½ grain of morphia, if this dose were required A larger proportion of atropia in repeated doses is likely to cause a temporary dimness of vision If carefully adapted to any given case I do not believe one need fail to prevent an attack or modify one already begun Where I have been able to administer the remedy myself in the early stage of hay fever or of acute nasal catarrh I have never failed to prevent the development of an attack, or, at least, materially abridge it If the impending attack is a light one, ⅛ grain of morphia should be given at the first premonition If the symptoms disappear, that suffices If they return after a few hours, the dose should be repeated, and in this way the paroxysms should be entirely prevented If the threatening attack promises to be a severe one, I give ⅙ or ¼ grain of morpnia (with atropia always), and I have found it necessary in a profound seizure to give ½ grain before the trouble could be subdued Minimum doses may be better as a rule, but in this malady the reverse is often true. When a small dose may not prevent suffering, a little larger one, to produce a decided impression on the nerves, may be entirely successful Those who are conversant with the physiological action of these drugs will readily understand how perfectly this remedy meets all the indications for treatment It relieves excitability or over susceptibility, and arrests the flux I regret that on account of the necessity of brevity I cannot elaborate this important subject. Wine has often acted like magic in arresting attacks This is indicated in those cases where anæmia of the brain exists It seems to arouse it from lethargy and fortify it against paroxysms Coca may be advantageously used combined with it when there is debility or mental depression Strong coffee is preferable to wine for obvious reasons, but it has the disadvantage of preventing sleep in many cases, while a moderate dose of wine may promote sleep Nitrite of amyl, in five drop doses, inhaled from a

handkerchief, will often relieve attacks, especially if they are accompanied by asthma Aconite should be used in case of fever

Cocaine, in a four or ten per cent solution, applied with a camels'-hair brush, gives speedy relief The patient should never omit clearing the membrane of mucus before applying any local remedy, else the medicine is diluted and prevented from acting on the seat of irritation Better than the solution is a six or ten per cent powder of cocaine and sugar of milk, applied to the nasal cavity with a pocket insufflator or powder-blower, small enough to carry in the vest-pocket, and to be used unnoticed the instant an attack threatens The vulcanite tip of the soft rubber tube should be applied to the lips, when a gentle puff of the breath will blow a cloud of the anæsthetic powder into the nasal cavity, when the hard rubber tube is properly directed This instrument is constructed after my large office insufflator, which is operated by a rubber bulb containing soft-rubber valves The effects of cocaine may last several hours, but repeated applications may be necessary to keep up continuous insensibility of the membrane during prolonged attacks However, it should be known that some persons possess an idiosyncrasy which forbids the use of cocaine The primary action may produce anæsthesia and anæmia of the membrane, regularly, but the blood-vessels may become dilated and remain so, instead of returning to their normal calibre as they do in most cases This condition of secondary hyperæmia is attended with intense hyperæsthesia and all the symptoms of severe hay-fever Fortunately there seem to be few who are so distressed by this remedy, and I have employed it in many cases of various diseases without observing any disagreeable symptoms



Bishop's Pocket Insufflator

Rhigolene spray may be mentioned in connection with cocaine, since they are both useful in producing numbness of the mucous membrane before cauterizing or cutting it Rhigolene will freeze the parts in two seconds, and is even more efficacious than cocaine in rendering an operation bloodless Morphine spray or powder is useful Zinc sulphate and glycerine of tannic acid are beneficial in cases of inflammation or ulceration Inhalation of spirits of camphor and of eucalyptol have proved grateful in light attacks Chloroform and fumes from nitre-paper will often help the asthmatic type

When an attack seems imminent, the determination of blood to the turbinated bodies may be relieved by derivation by means of active muscular exertion,—such as running rapidly up-stairs, putting the muscles of the hands, arms, and legs on the stretch, or practising calisthenic exercises,—anything to cause sudden and strong tension of the muscles and divert the mind In this manner the pent up nervous energy, struggling to escape, finds vent

Operations on the nose are in fashion now They have their good and bad features, like other fashions, but the reason that operative measures for the destruction of the offending mucous membrane and nerve ends in the nose often fail to cure is that the nerves distributed to that part are not the only ones which are over-sensitive Irritants impress the nervous centres through various other channels When the sensitive areas appear to be circumscribed by the limits of the nasal mucous membrane, the destruction of the sensitive areas in that membrane by the galvano cautery, chromic acid, the snare, saw, or knife, may be expected to afford relief Especially is this the case when there is much enlargement of the turbinated tissue, or such deformity of the nasal partition as to cause pressure on the turbinated bodies But so extensive are the connections of the nerves supplying the respiratory passages, so numerous and multiform are the exciting causes, and so various are the depots for the reception, and the channels for the transmission, of sensory impressions, that too much relief must not be expected from the removal of the turbinated tissues Moreover, an operation which will relieve one may not only benefit another, but may prove positively injurious I have known cauterizations of the back part of the lower turbinated body to cause the most distressing and alarming attacks of true asthma, which lasted for two or three months, and though the asthma apparently died out, it left a legacy that will probably make itself felt with every recurrence of a bronchial irritation I do not cite these facts to discourage those who might be benefitted by operative procedures,—and they may be many,—but because the truth touching all sides of this question should be known Another fact of importance to the patient is that after extirpation of the interior turbinated swellings, relapses may occur which will demand repeated operations But if the tissues are to be removed, the sooner it is done the better It should be borne in mind by the operator that it may be necessary to carry the destructive process into the vault of the pharynx, where granulations and adenoid vegetation may have become centres of irritation

The question will always arise In what class of patients may we expect the operation to prove curative or beneficial? It is obvious from the facts I have related, that we must confine this procedure to those cases in which there is a diseased condition of the mucous membrane of the nose or throat, or to those individuals in whom the paroxysms are provoked generally by irritants acting on these parts, or, I may mention a practical criterion by which to decide If a reliable preparation of cocaine, from four to ten per cent, will arrest a severe paroxysm when applied to the sensitive spots, an operation will probably be useful It might be supposed, on cursory examination of the subject, that this classification would include a vast majority of hay-fever subjects But a study of several hundred cases shows that in nearly one half the number attacks were occasioned, not by local irritants to the nose alone, such as dust, but by causes of quite a different nature Such patients may suffer at any and all seasons from various occult causes, and will probably prove refractory The other class consists of those

who inhale the materials which are provocative of their suffering Remove the material which irritates, or the tissue which is irritated, and we may confidently expect relief These are the people who suffer most in the summer months, when the grasses are ripening and the flowers blooming, and all the air is filled with the dust of the earth and the pollen of myriads of blossoming plants Let us hope that this class may supply medical literature with its most brilliant cures and its most grateful beneficiaries

719 W Adams Street

A NEW METHOD OF INTRA-PULMONARY MEDICATION, WITH REMARKS UPON ITS USE WITH PNEUMATIC TREATMENT

Read in the Section on Medicine, Materia Medica and Therapeutics, at the Thirty Eighth Annual Meeting of the American Medical Association, June 7, 1887

BY G W McCASKEY, A M, M D,

PROFESSOR OF DISEASES OF THE THROAT AND CHEST FT WAYNE COLLEGE OF MEDICINE FELLOW OF THE AMERICAN ACADEMY OF MEDICINE ETC

There are few questions of higher importance in practical therapeutics than that of topical medication of the lungs In discussing this question we may start with the postulate that particles of matter can enter the alveoli with the inspired air, be deposited upon their walls, and taken thence into the circulating fluids of the lymph spaces and capillaries

If carbonaceous particles floating in the inspired air can enter the pulmonary tissue until it is colored black, then the possibility of similar medicinal agents behaving in like manner must be conceded These facts, first correctly interpreted by Bouckman in the lungs of miners in the Hartz mountains, have been abundantly confirmed by Lowe, Petrens, Traube, Zenker, Von Ins, and many other reliable observers Nor can it be argued that the processes of anthracosis are too slow to make their application to therapeutics practical or fair On the contrary, the absorption of these solid particles is remarkably rapid Ruppert, for instance, found soot in the bronchial glands of a rabbit after two hours' inhalation of smoke These particles of soot must have entered the lymph spaces, thickly set throughout the respiratory tract, and traveled the distance of the lymphatics to the bronchial glands in this comparatively short time To aid this so called absorption the irritation of the alveolar walls causes the exudation of large ameboid cells, which envelope these foreign particles in their protoplasmic bodies and wander back with them into the pulmonary structure as actually observed by Von Ins and Oertel To further show that these particles penetrate beyond the bronchial tubes, cinnabar has been found upon the alveolar walls a few hours after its inhalation If any doubt should still remain concerning absorption from the pulmonary surface, Ruppert's experiment of throwing India ink into the bronchial tubes, and finding the capillaries beautifully injected, and the urine perfectly black in twenty minutes, must be regarded as conclusive [1]

[1] For details and fuller discussion see Oertel s Respiratory Therapeutics.

The importance of absorption becomes apparent when we reflect that the energy of the therapeutic action depends in great measure upon the depth to which the agent penetrates in the inter cellular spaces of bronchial and alveolar walls

The real practical question as it stands to day is In what form and under what physical conditions can medicinal agents be most effectually introduced into and made to exert their influence upon the inter alveolar and deep bronchial structures?

Of the possible forms we may distinguish four, viz Dry powders, gases, pulverized fluids, and vapors

The use of powders by insufflation is practically limited to parts above the *rima glottidis* At any rate, however, their penetration beyond the tracheal bifurcation with sufficient uniformity to meet the requirements of topical medication is extremely improbable Their tendency to irregular distribution—to accumulate in some places, with none in others—makes their action correspondingly irregular For these reasons they can be dismissed from further discussion in this connection, although their actual penetration into the alveoli has been demonstrated

Gases are not open to the same objection, their physical conditions being precisely identical with those of the atmosphere The gases heretofore used for inhalation probably act more in a general way after absorption than by direct local action At least, the clinical results obtained are in accord with this view, and it may be assumed that the local therapeutic effect of the respirable gases is not sufficiently energetic to justify any very sanguine expectations in this direction

The construction, by Sales Giron, in 1858, of an apparatus for pulverizing fluids for purposes of inhalation opened a new era in inhalation therapeutics With the advent of the various spray producing appliances, the local medication of the larynx and trachea became easy and certain Whether pulverized fluids, *as such*, however, can penetrate the alveolar passages must be regarded as an open question The tendency of these fluid particles in transit is to coalesce and form larger particles or drops, which, by impact or gravity, soon adhere to the mucous lining, and this, long before they have reached the alveoli, or even the bronchioles The observations advanced to prove the penetration of these fluid particles, as such, into the alveoli are not at all conclusive In Zdekaur's case of fatal hæmoptysis (Oertel) the patient had inhaled just before death a spray of solution of perchloride of iron After death, Dr Hohn found an excess of iron throughout the pulmonary tissue But as there is normally only about one part of iron to two thousand of blood (Becquerel and Rodier), the introduction of an extremely small quantity would be sufficient to show an increase What did reach the alveoli was probably not spray but vapor Oertel seems to hold the same opinion, for he says "It is not improbable that what is already a steamy mist may, in the smaller bronchi and lungs, be converted into actual vapor"

If the purpose be simply to medicate the larynx, trachea and large bronchi, then the experiments of

Tavernier, Moura-Bauroullon, Gratiolet, Sommerbrodt and others definitely settle the question With moderately deep voluntary breathing it can be most effectively accomplished But I think it may be safely assumed that *pulverized fluids, as such, do not reach the alveolar spaces* To this it may be answered that so long as the medicine reaches its destination, its precise form is not of practical importance, however interesting it may be scientifically But such a position is entirely untenable, for the physical conditions and processes best adapted to each are dissimilar, and to use them indiscriminately is both unscientific and irrational

Vapors, unless intrinsically irritant, offer no essential obstacles in the way of inhalation Their physical conditions, while they retain the vapor state, are identical with those of a gas such as the atmosphere There are no particles to coalesce or be carried by impact against the angles of the respiratory channel They form an integral and homogeneous part of the atmosphere with which they are b'ended, and meet the physical conditions of respiration fully and completely But something more than mere contact of this mixture of vapor and air is desirable It should be condensed and deposited upon the pulmonary surface

But we are met here by adverse physical laws, for, as Mr Joseph Ketchum has pointed out, the increase in temperature of some twenty degrees which the inspired air undergoes (assuming the temperature of the room to be 70° F) will make it retain not only all the moisture which it could possibly be charged with before inspiration, but take up as much more from the respiratory lining, so that deposition is apparently impossible

Can these conditions be changed? Can the temperature of the air be lowered instead of raised after inspiration? If so, then vaporized medicines can be deposited through temperature influences alone where pulverized fluids can probably never penetrate without themselves being vaporized Inasmuch as the temperature of the respiratory lining can not be safely lowered, it is evident that the only practical method is to heat the vapor before inhalation The first question then is At how high a temperature can air, saturated with vapor, be inhaled? Dr Morell Mackenzie says[2] that it should never be inhaled above 160° F, and that it is practically useless below 130° F As to the higher limit I will simply say that I have repeatedly inhaled vapors at 170° F without the slightest discomfort I will assume 158° F as the safe limit, and base my calculations upon that

The hygrometric capacity of the air increases with its temperature in a geometric ratio In order to show the enormous increase of vapor capacity with rise of temperature, I have compiled the following table

Temperature	Per cent of Vapor	Aqueous Tension
32° F = 0° C	6	4 6 millimetres
50° F = 10° C	1 2	9 165 "
70° F = 21° C	2 4	18 50 "
95° F = 35° C	5 5	41 9 "
113° F = 45° C	9 4	71 5 millimetres
149° F = 65° C	24 4	186 "
158° F = 70° C	30 5	232 "

[2] Diseases Throat and Nose, Vol I, p 549

It will be seen that saturated air at 158° F is nearly one third vapor, and that if the relatively cold respiratory lining will cool it down to 113° F, it will be a little less than one tenth vapor In other words, it will deposit more than sixty nine per cent of the vapor which is contained at the moment of inspiration While the cooling process commences in the mouth, it continues as far as the inspiratory volume enters For the reasons already set forth, therefore, I believe that vapors should always be substituted for sprays, when the object is to medicate the pulmonary lining proper In order that the best results may be obtained, and the vapor administered on a scientific basis, there are several conditions which I conceive to be indispensable and which can only be fulfilled by some special form of apparatus The conditions are

1 The air and vapor to be inhaled must be confined in such a manner that it can be heated to any required degree, and the temperature steadily maintained and measured

2 The supply of respirable air must be practically unlimited

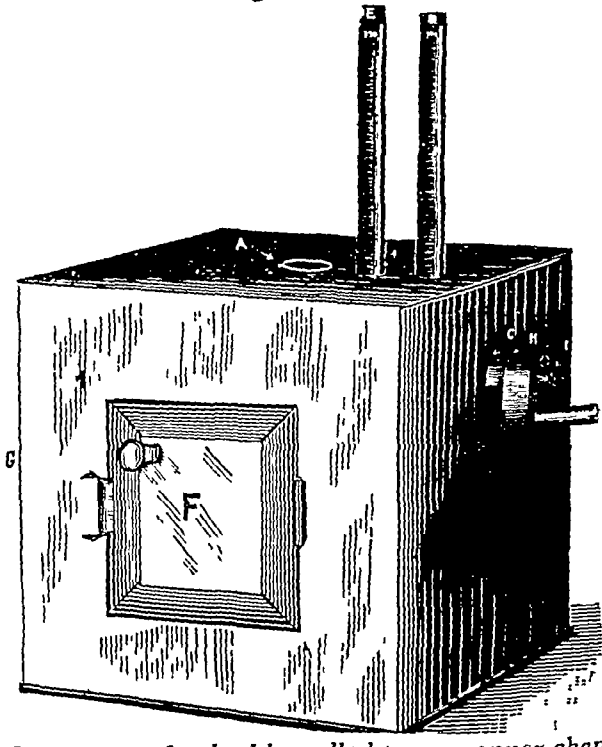
3 It must be impossible for the patient to expire into the compartment containing the medicated air

4 It must be so arranged that it can be saturated with the vapor of either volatile or non volatile agents, such as mercuric chloride

5 The respirations should be unembarrassed and continuous

6 There should be the least possible loss of heat by the vapor in its transit to the patient

The mechanism which I have finally adopted is shown in the following cut



It consists of a double walled tin or copper cham-

ber, having a capacity of one cubic foot, with an air space of one inch between the walls The external wall of the bottom has near its center a circular aperture some three inches in diameter, through which a Bunsen burner gas flame is allowed to play for the purpose of heating the contents of the chamber to the required temperature I have found it necessary to suspend a metallic diaphragm in the air space above this opening to prevent the flame from striking the inner wall, as the intense heat thus produced burns whatever comes in contact with the inner surface, producing pyroligneous acid and other offensive and irritating empyreumatic products With these precautions, the chamber will contain nothing but atmospheric air and the desired vapor In the outer wall of the cover is a smaller opening, A, which, acting as a flue, allows the mixture of heated air and gas from the Bunsen burner, after passing around the chamber in the air space between the walls, to escape without contaminating its contents This heated air circulating through the air space prevents the cooling of the outer stratum of the contents of the vapor chamber, with the resulting condensation At one side of this opening are two tubes passing through both walls, containing two carefully packed thermometers, D and E, with their registers projecting above Around the bulb of thermometer D is an envelope of thin muslin, which, being dipping into water, is kept wet by capillary attraction These thermometers serve the purpose of a hygrometer, indicating the degree of saturation with moisture, thermometer E also registering the actual temperature of the vapor

In front is a small door, F, six inches square, through which cups of water or medicine may be introduced, the temperature lowered if it becomes too high, or the interior cleansed

Another opening two inches in diameter, indicated by G, but not shown in the cut, furnishes fresh air, and allows a spray to be thrown into the chamber—the quickest and most satisfactory method of charging the air with vapor In using agents non volatile at ordinary temperatures, this is probably the only method by which they can be diffused in a definite strength in the vapor chamber Bichloride of mercury, for instance, can be uniformly diffused in this way so strong that the vapor is quite intolerable, and yet of a definite and easily calculated percentage

At any time before the saturation point has been reached the thermometer with the wick around it (bulb D) will stand from five to thirty degrees lower than the other The cooling of the bulb is produced, of course, by evaporation from the wick into an atmosphere which is capable of holding more moisture If, when thermometer D stands say at 120° F and E at 150° F—a combination which I have often seen—a dense spray is thrown in, the column in D will rapidly rise to the level of E, showing that saturation has occurred As long as these thermometers register the same temperature the air in the vaporizer is saturated with moisture for that particular temperature and pressure, and can not by any possibility contain more

Directly opposite the opening G is a tube C communicating with the interior of the vaporizer To this is attached the tubes for conveying the vapor to the patient First comes an oval compartment one by two inches and one inch long, which contains two valves, H and I, for controlling the currents of inspiration and expiration The valve H (not seen in the cut), is so adjusted as to close the passage *from* the patient toward the vaporizer, preventing the expired air from entering the latter, but opening freely in the opposite direction, allowing the passage of the medicated vapor The valve I is so arranged that it allows the escape of the expired air between the valve H and the patient's mouth This valve closes by its own weight at the end of expiration, so that the lungs can be filled only with the contents of the vaporizer, no air from the room being permitted to enter The force required to open these valves (they are both self closing) is very slight When used in connection with pneumatic treatment the valve H opens by differential pressure, and therefore offers no resistance The valve I must be forced open But the light weight, and the fact that it hangs only 22½° degrees from the perpendicular makes it of little importance

The oval compartment containing the valves can easily be taken apart after every treatment, washed with antiseptics and thoroughly flushed with water It is covered with a rubber band to prevent radiation of heat, while an ordinary rubber tube passes directly to the patient This tube and the oval compartment together have a capacity of seven cubic inches, which adds that much to the residual air, but I do not see how it can be materially reduced The temperature of the vapor in passing through these tubes to the patient will fall about ten degrees, so that the dry bulb thermometer should register about that many degrees higher than is desired for inhalation

With better facilities than were at my command the mechanical details of this apparatus could be materially improved But I am satisfied that it accomplishes the purposes for which it was intended, viz, the introduction into the lungs of air at a comparatively high but accurately measured temperature, saturated beyond question with medicated vapor of definite composition, using either volatile or non volatile agents, in order that the relatively cool mucous lining may lower its temperature and cause deposit of its suspended moisture The precise physical condition of non volatile agents prepared in this manner is an interesting question Such agents as mercuric chloride, sulphate of zinc, etc, can only be volatilized from the dry powder at a very high temperature The fumes or sublimates thus produced can only be diffused through the air in uncertain proportions If placed in solution and boiled the resulting vapor will of course contain nothing but water But if made in solution of any desired strength and sprayed into a heated atmosphere the particles of finely divided fluid instantly vaporize, and the vapor holds in solution the same percentage of medicine as the water from which it was made Knowing the capacity of the air for vapor at any given temperature and pressure, and having the com-

parison of the wet and dry bulb thermometers to indicate the degree of saturation, we can easily calculate the exact quantity of medicine in each cubic inch of air inspired If we could determine the reduction of temperature and increase of pressure which takes place in the respiratory tract we would possess all the elements for an accurate computation of the amount of medicine deposited in the lungs It remains for future investigation to complete these data if it be possible, but in the meantime, I believe that our knowledge of physical and physiological laws warrants the belief that in this direction lies the highest measure of success in typical medication of the lungs

The idea of combining topical medication with pneumatic treatment is not of recent date It is only necessary, however, to refer to the older methods to show their inefficiency Crow caused compressed air to pass through one or two Wolff's bottles filled with hot aqueous solution of sal ammoniac before inhalation As sal-ammoniac sublimes only with dry heat it is needless to say that his patients only received hot aqueous vapor, with a few particles of solution mechanically carried over (Oertel) The quantity introduced must have been entirely problematical and accidental This method with volatile agents was followed by Waldenburg, Cube, and Domansky Dr Crabbe's method was to fill the Waldenburg condenser with air charged with vapor and then compress it A large proportion was lost in the water by compression and absorption, and only a small and indefinite quantity reached the lungs The results were so unsatisfactory and the methods so unscientific that Oertel declared the number of medicines which could be used in this way almost limited to a few ethereal oils, and advised abandonment of further efforts to combine topical medication and pneumatic treatment The persistent efforts which these pioneer investigators made for the simultaneous accomplishment of these two objects clearly shows their opinion of its desirability

There are various anatomical and physiological reasons why medication of the alveolar walls can better be accomplished during increased pulmonary pressure The increased air space present is produced almost entirely by the distension of the elastic alveolar walls This increases the area of absorption, and not only so, but it renders medication possible in certain areas, such as the apices, or partially collapsed lobules, where expansion is ordinarily imperfect The increase of the tidal volume of air which spirometric tests have demonstrated, increases the movement of the lung structure, and quickens the flow of lymph in the spaces having their origin in the alveolar walls The direction of this flow is of course *from* the alveolar septa, and to accelerate it is to promote absorption Thus the conditions of increased intra-pulmonary pressure are the best possible for topical medication of the alveolar walls, besides which we get the combined results of the two processes

With the older pneumatic apparatus simultaneous topical medication was manifestly impossible With the Ketchum Cabinet, however, the conditions are under complete control, and we can distend the alveolar passages to any allowable extent, and introduce medicinal agents with the same facility as before expansion I believe that this combination of mechanical and medicinal therapeutics offers the most favorable outlook for the treatment of that class of pulmonary diseases in which increased intra-pulmonary pressure and topical medication is indicated. This includes more particularly bronchitis and phthisis, while in the more purely mechanical treatment of emphysema, unresolved pneumonia, and pleuritic exudations, it will occasionally be found useful for the treatment of concomitant conditions

In conclusion, it affords me pleasure to acknowledge my indebtedness to Dr H F Williams, of Brooklyn, and Mr Joseph Ketchum, of New York, for valuable suggestions

GLANDERS IN THE HUMAN SUBJECT—WITH A CASE

Read before the Section of Practice of Medicine, Materia Medica and Physiology, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887

BY C N COOPER, M D,
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Glanders is essentially an equine disease, and found among horses, asses and mules the world over The names *equinia* and *farcy* are also given to this malady Aristotle described a disease identical with this, among the horses of his time Its prevalence in any country is said to increase from 50 to 100 per cent during and after a war As to its spontaneity veterinarians do not agree Some aver that every case is to be traced to some other case, as in measles or small-pox in man, others deny this, claiming that, under favoring circumstances, it originates *de novo* All agree that there is a glanders bacillus, but do not agree as to whether it is the cause or concomitant of the disease

It is not in the province of this paper to discuss this point at length, but I cannot let it pass without calling attention to the fact that horses that have been apparently in perfect health all their lives have been known to become glanderous when crowded together on shipboard upon long voyages This is often the case when, on account of storms, the hatches are closed much of the time, so that the air becomes stifling and impure Horses subjected to great privation and those kept in damp, ill ventilated stables, seem sometimes to develop this disease spontaneously It does not seem to me probable that the bacilli of glanders could exist, latent, in the animal for an indefinite period, waiting for favoring circumstances to present themselves for their development The virus exists in all the fluids of the affected animal, even the semen It is an important fact, to be remembered, that a glandered horse may be fat and sleek, and, because of his healthful appearance, become a ready source of contamination to other horses or to man All are agreed that this disease

never originates in the human race I am confident, though this is a disputed point, that its virus is a fixed poison like that of vaccinia or syphilis, and cannot be conveyed except by some form of inoculation From my own experience and observation, as well as from the meagre literature there is upon this subject, I conclude that there must be some solution of continuity where the virus finds ingress This may be upon the skin, or upon some mucous membrane, as the mouth, nose, air passages, or possibly the vagina

Very little has been written upon this topic Two centuries ago Helmont ventured the suggestion that glanders might have been the original source of syphilis Later, Ricord revived the idea, but Virchow concludes that it is impossible So far as I can find, the first case reported was by Lorin, in 1812 The next was by Muscroft, of Edinburgh, in 1821 Copeland, of London, also reported a case about the same time In 1828 Prof Coleman wrote a paper on the subject, and not long after Rayer gathered all that had been written, up to that time, into an elaborate paper published in vol vi of "Mémoires de l'Academie Royale de Médicine " Ziemssen's work contains a lengthy article on the subject, as also Pepper's "System of Medicine " In Quain's Medical Dictionary a fair mention is made of this disease, yet I imagine that the busy practitioner who is called to a suspected case may read all that is written upon the subject, then turn away feeling that he is thrown upon his own resources for both diagnosis and treatment, and however well read he may be, he may be pardoned for failing in his diagnosis when called to his first case, acute, subacute, or chronic

The incubation of glanders occupies from three to five days The attack is ushered in by a chill of greater or less severity, acute pain like that of rheumatism, yet without local inflammation, and an indescribable *feeling of languor* The temperature soon becomes high, the pulse quick, weak, and unsteady, the tongue heavily coated, soon becoming dry and brown There is constipation, and scanty urine The teeth and lips early take on sordes The pain continues, now here, now there, but is prone to be cephalalgic, and often intense Nodules appear promiscuously about the face and body, and often break down into bullæ Deep abscesses form, involving both cellular and muscular tissue, these are painful, and mature very slowly, discharging, when opened, a thin, dirty, sanious pus At the point where the abscess is opened, a deep ulcer soon forms, which seems to be a sort of sloughing of the integument and immediately underlying tissue These heal very slowly, if at all A papular rash also appears here and there upon the body, but seems to be insignificant The mucous membranes early become dry, then form ulcerated spots, from which a fetid muco pus discharges The integument becomes earthy and cadaverous, and the whole body exhales an offensive odor Day by day the trouble advances, baffling all efforts to check it, and the patient usually dies, in from one to three weeks, in a loathsome condition

If the attack is subacute, the duration is longer, but is only a prolonging of the agony, until death comes to the rescue Some cases, however, linger for months, or even years, in their misery, and finally die from exhaustion, unless, indeed, the patient becomes wearied out with what seems to be a hopeless contest, and ends his suffering by suicide A few cases of recovery, however, have been reported After detailing a case which was under my care for nearly two years, I will consider somewhat the differential diagnosis between this disease and several others with which it may be most easily confounded.

Mrs Lorenson, native of Germany, a widow, æt. 23, came under my care on June 24, 1884, with the following history In September, 1883, her husband, living near Elgin, Ill , bought a fine looking horse, said to be suffering with an ordinary distemper, for which he at once began to treat him Very soon after, Mr L was taken sick He had a well marked chill, severe pain in different parts of his body, and extreme languor His physician diagnosticated some form of blood poisoning, but could not determine its exact nature He was seen by several competent physicians, who were all in doubt about the case, until he told them of the horse he had been treating An examination of the horse led to the belief that its trouble was glanders Dr Paaren, then State veterinarian of Illinois, was called, and pronounced it a true case of glanders There was now no doubt as to the nature of the trouble Nodules formed here and there, and broke down into bullæ Deep seated, painful abscesses also appeared, and failed to heal After about three weeks of suffering, he died in a most loathsome condition, but not until his wife had become contaminated Her attack was similar to his, but less severe, and by prompt, energetic treatment she was so far restored as to be able to perform some domestic duties, until the following June, when she suffered a relapse and was brought to the "Poor Farm " She was placed in a small isolated house, to be cared for by a "sister" from a convent in Chicago I now copy from my notes, taken during the progress of the case

Mrs L is suffering severely from a hemicrania She has a purulent vaginal discharge, a small ulcer on the right thigh, nearly healed, and a large one in *the roof of the mouth, with angry, ragged edges*, and a patch of denuded bone about 5 lines in diameter just back of the right canine tooth Small patches of ulceration extend into and down the throat as far as can be seen Her face is swollen, and her eyes expressionless The tongue is heavily coated and the skin is of a dirty gray color Her pulse is 110, very weak and unsteady She has no appetite, is much emaciated, and a sickly odor emanates from the body The urine is scant and thick, and bowels constipated She has been informed that she can live but a short time, and cares not how short the time may be Gave a brisk cathartic, to be followed by syr iod of iron in full doses every four hours, to be alternated with a capsule of quin sul , ac salicyl , and morph sul She is to have all the milk, beef and eggs she can take All ulcers are to be thoroughly cleansed three times a day, and dusted with a powder of soda, sulphur and iodoform, equal parts All her underclothing, and everything about her at

all soiled, are to be burned, and strict attention given to cleanliness, disinfection and ventilation Frequent alkaline baths and changes of clothing ordered, and every soiled cloth or garment is to be burned as soon as removed

July 1 Patient suffers less, and is less despondent, takes milk and eggs fairly well Substituted pot iod, ammon mur, and hydrarg bichlor for the iodide of iron, but continue the capsules four times a day

July 4 The iodide mixture is not well borne, give citrate of iron and quinine instead, and the capsules are to be used only for relief of pain, which is not very troublesome A swelling under the left eye threatens an abscess, and both eyes are red and swollen Thinking the iodoform may be the cause of some of this disturbance, this is to be used only on the leg ulcer, and the mouth ulcer is to be treated with a saturated solution of boracic acid in glycerine

July 10 The eye trouble has disappeared, except the abscess forming under the left eye, which is now being poulticed The vaginal discharge is much diminished, the appetite is good, and she is quite cheerful Treatment continued

July 12 Dr Hard, of Aurora, visited the patient with me to day, but declined to give any advice, except to wash ulcers in a sulphurous acid solution A thin piece of bone, as large as the finger nail, has exfoliated from the roof of the mouth, and the ulcer is reduced to the size of a quarter of a dollar, while those of back part of the mouth and throat have disappeared, leaving the membrane thickened and granulated, The fetor of the body is gone, but the breath is still offensive She is gaining in flesh, and the skin has improved in color The leg ulcer gives no further trouble She suffers considerable pain in her back, indicating a return of her menses, which have been absent since February

July 16 The abscess under left eye has matured and been lanced, another one appears to be forming under the right eye There are numerous small, hard nodules about the face, and a deep, painful swelling in the calf of the left leg An abscess has discharged spontaneously in the right labium, but gives very little trouble Poultices are ordered for the leg, and tinct iodine for the swelling and the nodules upon the face, and tr of iron and cod liver oil internally

August 1 The abscess under right eye is discharging quite freely The nodules are all gone, and the leg is less painful, but an abscess is unavoidable The ulcer in the mouth is slowly healing, but an ugly one under the upper lip is very obstinate, probably because not well cleansed I have ordered it syringed three times a day, and packed with absorbent cotton wet with boracic acid and glycerine Her appetite remains good, and she goes about the yard, spending much of the time out of doors, when the weather permits

August 15 The mouth ulcer has healed, leaving the root of the canine tooth exposed almost to its point That under the lip is improving The abscess on the leg is now discharging, and giving very little trouble A small ulcer marks the spot of the abscess under the left eye, and a large one that under the right eye, where the integument and underlying tissue sloughed, leaving an excavation 2½ inches long by 1 inch wide, extending to the periosteum, which seems healthy The vaginal discharge has entirely ceased, but she suffers a good deal of pain in her back, for which a chloroform liniment is ordered She is fleshy, eats very heartily, and is very hopeful

September 1 The liniment affords but temporary relief to the pain in the back, and she is ordered to take a hip bath before retiring The face ulcer refuses to heal, and I have cauterized it thoroughly with solid nitrate of silver She is now taking cit iron and quinine in maltine

September 5 Was called in haste to day to see my patient, and found her suffering intense pain all over her She had had a severe chill, and now the face was very red and swollen, the pulse 120, hard and cordy, and the temperature 104° I found that she did not take the hip bath until this morning, after which she went directly out of doors into a chilly air, and sat down for a half hour, when the chill occurred I gave her liberal doses of quinine and aconite

September 6 Temperature normal, pulse 90 and weak, the face still swollen and erysipelatous The iron and quinine in maltine is resumed

September 15 Face ulcer looks as though it would enter the eye, in spite of iodoform and argent nitras In all other respects she is doing well again The ulcer which formed at the opening of the leg abscess has healed For one week she is to take Fowler's solution, and the iodides of lime and soda in sarsaparilla, then a tonic of iron, quinine, and strychnia

October 1 The face ulcer is at a standstill The menses have appeared, and she says she feels well She walks a mile without tiring, and spends all the pleasant hours in the open air

November 1 Patient is doing well in every way, except that there is no improvement in the ulcer, which I am cauterizing every three or four days

November 10 The ulcer has burrowed under the lid and entered the eye, lighting up a most fearful inflammation The injected cornea is seen in a depression of the thickened conjunctiva, which has the appearance of a piece of raw beef The aqueous humor is cloudy, and there is simply a perception of light The pain, of course, is intense, and she utterly refuses food Hot fomentations are to be constantly applied to the eye, and sufficient anodynes given to relieve pain

November 15 Patient is emaciating perceptibly She takes no food except a little milk There is no change in the appearance of the eye, but she gets a little more sleep, by the use of the anodynes The right side of the face is paralyzed The extremity of the infra orbital nerve is doubtless destroyed The appearance of the face is brutish, and she is greatly depressed mentally It is scarcely possible to properly cleanse the eye

December 1 She has lost all the flesh she had gained and takes no food but milk with lime water No medicine is retained except tablets of morphine and atropia A preparation of morphine and atro-

pia in a saturated solution of borax in rose water is applied freely to the eye She now consents to enucleation, but the operation would be unwarranted in her condition The pulse is 140, small and very irregular, and death seems inevitable and imminent

December 5 Patient has rallied, pulse 100 and more regular, and the intensity of the conjunctivitis has somewhat subsided She takes more milk and a little broth, but no medicine except the tablets

December 15 Considerable improvement She takes one quart of milk and one or two eggs every day, besides occasionally a little broth or gruel Her menses have again appeared The cornea and aqueous humor are clearing slightly, and there is a corresponding improvement in the sight There is much less pain and swelling about the eye Local treatment continued, and tonics resumed

January 1, 1885 Eye trouble is gradually subsiding, and a diet of milk, eggs, meat and coffee is relished Urine scant and thick Right knee painful, without swelling or redness Chloroform liniment ordered for the knee, which is to be wrapped in hot cotton batting Pot brom , acet rad , and spts æther nitr in lemon syrup internally

February 1 Destructive process in the eye has reached its height The conjunctiva is so far destroyed that the eye seems to have no attachment except the muscles, which are visible, and the vessels and nerves, yet there are slight indications of repair Ordered a fine powder of boracic acid and iodoform to be dusted into the eye night and morning, after thorough cleansing, and the eye to be kept covered The kidneys are more active, and menstruation has again occurred, delayed but one week There is a discharge of watery pus from the right ear, which is to be kept cleansed and the iodoform powder applied as to the eye Pain continues in the knee, where an abscess is forming The flexor tendons are quite contracted Internal treatment, syr iod of iron, and quinine

February 15 Blister applied to knee, which is still quite painful, with no progress toward suppuration The ear gives no further trouble Iodoform powder discontinued, and morphine and atropia solution freely applied to the eye She eats and sleeps well and is taking on flesh again

March 1 Gradual improvement in all respects except the knee, which remains the same in appearance, but is less painful All sensations normal, and she would be about the house and yard but for the knee She can see the bars in the window sash across the room with the affected eye As an experiment am now giving her McDade's prescription instead of the tonic The eye wash is continued Drs Robbins and Milbacher, of Aurora, visited the patient with me, and advised enucleation if acute symptoms should recur so as to threaten the well eye

March 10 Fluctuation seemed evident in the affected knee, but the exploring needle shows only blood Blister renewed

March 20 Patient weakens under McDade's prescription, and I have added iron and quinine for internal treatment Poultices are resumed on knee

April 1 Abscess lanced, discharging about 3 oz of thin sanious pus Poultices continued The small ulcer under left eye is healed, and the one under right eye is nearly healed, there being only a deep spot at the right inner angle of the eye, where the lid lost its continuity with the nose There is marked improvement in her general appearance

April 15 A deep ulcer marks the spot where the knee abscess was opened, but there is no pain The knee is flexed to nearly a right angle There is a suspicious puffiness about the left ankle, with a good deal of pain After painting the whole ankle with tinct iodine I have applied a thick layer of cotton batting, and over this a rubber bandage, from the toes, as tight as she can bear This is to be repeated every other day

May 1 Right knee has healed, but is very tender and quite swollen It is dressed simply with cotton batting, held in place by a firm roller bandage Left ankle and foot are somewhat painful and considerably swollen Cotton and bandages continued She failed to menstruate in April, and feels heavy dragging pains in her back and hips, otherwise she feels well, and is gaining in flesh

May 15 Severe pain in the left shoulder, without swelling or redness No pain in foot or ankle Chloroform liniment and hot cotton applied to shoulder, and sod iod , sod brom , and salicyl internally, alternating with iron and strychnia Eye trouble improves slowly

June 1 Shoulder somewhat better, treatment continued Under the influence of oil, rubbing and stretching, the flexion of the knee is yielding, and patient gets about the room by the aid of a chair Deep ulcer at the inner angle of the eye is slowly filling I apply solid argent nitr about once a week and the eye wash night and morning

June 15 Pain has passed into the right shoulder, leaving the left perfectly free, but it is not very severe Patient is cheerful and hopeful

July 1 Pain in shoulder is not constant, but when absent there, is felt in right thigh, but not so severe as to prevent her getting out of doors with the help of crutches Menses appeared in May and June without pain She can distinguish large letters with the affected eye, and knits or sews most of the time Is now taking syr iod of iron in an elixir of bark and iron

August 1 Another abscess has appeared and matured rapidly below the right knee, two inches from the site of the former It is quite superficial, and but slightly painful I attribute this one largely to excessive eating with too little exercise She is very fleshy Am varying treatment somewhat, but adhering to alteratives and tonics

September 1 A small ulcer formed when the last abscess was opened, but filled and healed very quickly For two weeks there has been some ulceration in the throat, which I have thoroughly cauterized every three or four days, while she has applied a powder of sulphur and soda t i d Powder is to be continued Her condition is very hopeful, though the blood is still lacking in red corpuscles

January 1, 1886 The case has progressed well, though slowly, since last note Menses seem fairly

reestablished, not having missed since April Will advise that she be moved to the Poor House, as a matter of economy to the county and of comfort to the patient I have strong hope that in the spring she may go out into the world again, and support herself

February 1 Patient has been removed to Poor House Is suffering from a "cold" with some hoarseness and sore throat The mucous membrane is rough and thickened I cauterize it occasionally, and she applies the sulphur and soda powder Otherwise she is doing well

March 1 I took patient to Chicago to be operated upon for the ectropion, which, with the drooping of the angle of the mouth is all that prevents her presenting a picture of health The wound is healing well, but there will be but little improvement in her deformity, owing, doubtless, to the paralysis of the cheek muscles

April 28 No appearance of a return of the disease, and I feel quite confident that, if she follows directions, she will remain free from it For some weeks she has been taking a mixture containing tincture of iron and ammon muriate Upon her promise to continue this every alternate week for at least three months, I have consented to her leaving the "House," and she has gone to day to do housework upon a farm I will endeavor to ascertain her condition from time to time, hoping, however, that she is at last free from her malady

As to the differential diagnosis and treatment, something remains to be said In the onset of the disease I think we may exclude rheumatism, for though the pain is similar, we would not expect so severe an attack of rheumatism without inflammation of some of the joints We may exclude idiopathic neuralgia, for the constitutional disturbance is too great A severe attack of erysipelas may be suspected, but in erysipelas we do not find so much pain and depression, and the headache is general, and of a dull, perhaps throbbing character, while that of glanders is decidedly neuralgic The initial pain, fever, and languor of diphtheria often precede the throat lesion, and are not unlike those of glanders, but if no membrane appears within 24 or 36 hours we may be warranted in excluding diphtheria In typhoid fever we usually have premonitory symptoms Then, too, the pain is mostly confined to the back and head In glanders the attack is abrupt, and the pain general. One may well be pardoned for thinking he has a case of acute blood-poisoning, in which he is not able to trace the source, for glanders is emphatically a hæmotoxic affection, and both victim and physician may be entirely unsuspecting, until, perhaps, some chance remark leads to an investigation which reveals the history of glanders in connection with the case

Between chronic glanders and secondary or tertiary syphilis there is a similarity, yet with care I think there need be no mistake A marked characteristic in glanders is great loss of red blood corpuscles, even though the patient is well nourished otherwise Such is not the case in syphilis The persistent periosteal tenderness of chronic syphilis is not found in glanders, nor the copper-colored erythematous patches, syphilitic ulcers tend to spread and to deepen, and have a special affinity for the periostum and bone Those of glanders neither spread nor burrow, except occasionally in loose areolar tissue, and it is very rare for the periosteum or the bone to be implicated The body fætor of glanderous patients is peculiar, almost cadaverous, and not like that of syphilis The discharges from glanderous abscesses are peculiarly ichorous, not unlike the fluid which drains from extensive gangrene With these distinctive points in view, the careful observer should be able to distinguish between these affections

I am of the opinion that the virus is somewhat weakened by passing through the human system, and that the disease contracted from man is more likely to be subacute, and more amenable to treatment than when contracted directly from the horse

As to treatment, very little instruction is given in the books Gross says "Bleeding, both local and general, purgatives, tonics and stimulants have proved alike useless" He advises irrigation and cauterization of the wound, or excise it This is certainly sound advice if we can see the patient before the virus has entered the system, but, unfortunately, this is seldom the case When bitten by a venomous or rabid animal, the victim knows at once that he is injured, and seeks instant relief The victim of glanders is unsuspecting, and almost invariably ignorant of the fact that he has been inoculated, until the incubative stage is complete, when it is too late A few hours even will suffice to fill the system with the poison, which we must endeavor to antidote or eliminate if we think to benefit the patient In the nature of the case all depletion must be avoided, and the system sustained by every possible means The treatment must be prompt and heroic After a careful study of the subject from all the sources at my command, I conclude that quinine in large doses, often repeated, so as to bring on cinchonism as quickly as possible, supplemented with tincture of iron, freely administered, either with the quinine or alternating with it, will give the best results that we can look for in this terrible disease At the same time we must nourish the patient in every possible way If in this way, or indeed in any way, we succeed in changing an acute into a subacute attack, we shall have increased the chances of recovery tenfold I have a strong hope that when we shall have learned more of the true nature of this malady we shall be able to treat it with a reasonable degree of success

I am glad to be able to add the information, just received by letter, that Mrs Lorenson is strong and vigorous, and earning good wages as a housemaid

Cleveland, Tenn , October 1, 1886

DISCUSSION

DR SMITH, of Iowa, had had a patient similarly affected from a glanderous horse

DR H W. HITZERAT, of Pennsylvania, had had a case like Dr Cooper's first Patient had neuralgic pains, with a fatal result in nineteen days

Dr Staples, of Minnesota, had a case which occurred in Readville last fall The patient died after a short illness, with symptoms similar to those mentioned by Dr Cooper

MEDICAL PROGRESS.

Cannabis Indica in Diarrhœa.—Dr Frederick F Bond and Mr B E Edwards, of Rastrick, say Dr S J Rennie, of Cawnpore, in the *Indian Medical Gazette*, for December, 1886, calls attention to the value of cannabis indica in the treatment of dysentery We wish to draw attention to its value in a similar condition, namely diarrhœa, especially in the type known as summer diarrhœa or English cholera. Attention was drawn to it in this connection by Dr Turner, in the *Lancet* (vol ii, 1886, p 536) He says "In ordinary diarrhœa (referring to summer diarrhœa presumably) the formula

℞.	Tincture cannabis indicæ	♏x.
	Spiritus chloroformi	♏x
	Tincture kino	ʒj
	Aquam menthæ piperitæ ad	ʒj

in a modified dose, will be found very serviceable Being connected with a dispensary where thirty to forty cases of diarrhœa presented themselves daily for treatment during the months of August and September, and where a great variety of remedies were tried, so great was the superiority of Indian hemp above the others, that the patients themselves got to know it, and invariably asked for the green medicine "

We have been in the habit of prescribing it in nearly all forms of diarrhœa with marked benefit, combined with medium doses of morphine In summer diarrhœa the effects are very striking There is no necessity to record cases, they are all very much alike, the great depression, the frequent watery stools, the vomiting, and the cramp like pains are very quickly relieved, the appetite speedily returns, and by the following or third day the cases are practically well, except for some weakness and debility The formula we generally use for an ordinary adult is

℞	Tincture cannabis indicæ	♏x
	Liquoris morphinæ	♏v vel ♏x
	Spiritus ammoniæ aromatici	♏xx
	Spiritus chloroformi	♏xx
	Aquam ad	ʒj

To be repeated every one, two, or three hours according to circumstances Directions *No food for several hours, but a little brandy and water* We have not seen one case run on to a fatal issue under this treatment

It appears to act by increasing the astringent and anodyne properties of the morphine (the dose of morphine would have very little effect alone), by its stimulant effect on the nervous system, improving the tone, and by improving the appetite, thus enabling the system to quickly overcome the marked depression and exhaustion Most remedies in this disease rather retard the return of the digestive function, but from our experience Indian hemp markedly accelerates it Indian hemp seems, also, frequently to counteract the bilious action of morphine, as well as the loss of appetite, and allows it to be given where it otherwise would not be tolerated

In other forms of gastro intestinal disturbance it is also valuable, probably for the same reasons It was of marked use in a case of subacute gastro enteritis, which had existed for a few weeks before it came under our care, in a girl aged 13 years, showing the following symptoms marked anæmia, which had gradually come on after the other symptoms, constant pain over the abdomen, especially in the epigastric region, increased on pressure and after food, tongue covered with yellowish white fur, loss of appetite, vomiting at variable times after food of partly digested material, diarrhœa, six or eight stools in the day, which were watery and green, containing partly digested food material, some rise in temperature—a little over 100° F She was first treated with bismuth, then with effervescing mixtures, with no benefit, then with the cannabis mixture (modified to suit her age), and the symptoms very quickly subsided, the vomiting and diarrhœa were checked, the pain ceased, and the appetite returned By the end of the week all the symptoms had disappeared except the anæmia, which persisted for a short time longer

In cases of tuberculous diarrhœa we have not seen much benefit, beyond a slight relief of symptoms for a short time, though we have not had sufficient experience in this type, nor in the excessive diarrhœa in typhoid fever.—*The Practitioner*, July, 1887

Naphthalin in Intestinal Catarrhs and Dysentery.—Following the recommendation of Professor Rossbach, Dr N M Doigopoloff, of Kursk, administered (*Proceedings of the Medical Conference at the Kursk Zemsky Hospital*, January–June, 1886, page 137), naphthalin in about 140 cases of acute and chronic dysentery and acute and chronic catarrh of the large bowel in children and adults The drug was given in the dose, varying from 1 to 5 grains, five times a day, either alone, or simultaneously with an emulsion containing castor oil and opium Only in two cases naphthalin caused vomiting, and was discontinued, and only in four it remained inactive In the remaining case (as far as their subsequent course was known to the author) the remedy gave excellent results, and that even in patients who had been previously vainly treated by various ordinary means Already, after a few first days of the treatment, diarrhœa subsided to rapidly cease altogether, tenesmus diminished stools lost their offensive odor, etc The author details the case of a boy, aged 9, with chronic dysentery of two years' standing, where recovery ensued from the use of 60 1 grain pills (taken four or five times a day) In another child, aged 2, with dysentery of eighteen months' duration, the same result was obtained from giving 1 grain doses three times daily for twenty days In acute cases diarrhœa sometimes ceased after a three days' treatment by naphthalin Dr V I Doljenkoff, of Kursk, also adduces two cases of follicular enteritis where diarrhœa ceased after 3 and

2 5-grain doses of the drug It reappeared, however, after discontinuing naphthalin The naphthalin treatment of diarrhœa proved successful also in the hands of Drs Kurkovsky, Falkenberg, Novikoff and Smatkoff, while Drs Schwarz and Karst speak of it very unfavorably —*London Medical Record*, May 16, 1887

HYSTERECTOMY IN CANCER OF THE UTERUS —DR SAUVE, of Paris (*Gaz de Gynécologie*, Vol II, No 23), after having reviewed a large number of reports from other countries, summarizes the subject as follows

1 Hysterectomy in cancer of the uterus does not deserve the disfavor with which it is regarded by the French It is capable of affording the patient a long period of ease In cases where the disease returns after operation it is attended with less pain

2 Hysterectomy is indicated

a When a removal of a portion of the uterus has failed to give satisfactory results

b When such a partial operation is manifestly impossible or insufficient

c When cachexia is too far advanced and the parametrium is still healthy

d It is favorably contraindicated when there is marked cachexia adhesions with neighboring organs or implication of remote organs As a corollary to this proposition it is necessary before operating to assure one's self of the condition of the parametrium by an examination conducted with the aid of anæsthesia

e The operation is not more difficult than the principal abdominal operations The statistics of the operation are constantly improving

f The method of election is colpo hysterectomy Laparo-hysterectomy should be reserved for cases where the body of the uterus is too large to pass through the vaginal wound, it is an unsatisfactory operation under ordinary circumstances

The most vigorous antisepsis is essential to success Iodoform, and particularly iodoform gauze, is much more valuable than carbolized dressings As a rule it is best to apply sutures without drainage

TREATMENT OF FRACTURES OF THE FEMUR —DR THIRIAR, in an interesting clinical lecture to the Brussels medical students on the treatment of fractures of the thigh, pointed out the advantages of the telescope apparatus proposed and described by Professor Derobaix some seven years ago This consists, firstly, of a starch bandage reaching from above the knee to the foot, provided with a stirrup and a cord, which passes over a pulley, and has a weight attached to the end in order to keep up constant extension, and, secondly, of a femoro pelvic starch bandage, which is applied two or three days after the first bandage, the upper part of which it covers so that the one may slide within the other in telescope fashion When dry, the femoral portion is slit up It can thus be opened and the seat of the fracture inspected at pleasure, and if necessary, manipulated by the hands, while an assistant makes any required degree of traction on the leg Afterwards it can be tightened up by straps and buckles with which it is provided, and the limb is then absolutely protected against all lateral or see saw movements, while the patient can be moved as much as is necessary for purposes of cleanliness without endangering the rigidity of the fractured limb By this means Dr Thiriar believes better results can be obtained than by any other apparatus, and he publishes a list of thirty cases, in all but two of which there was either no shortening or so little that it did not amount to a quarter of an inch In one of the two unsuccessful cases the patient was excessively unruly, and in the other no amount of manipulation appeared to reduce the deformity when first seen —*The Lancet*, July 2, 1887

BINIODIDE OF MERCURY IN SCARLET FEVER —DR CLEMENT DUKES says I have now given the biniodide in several cases of scarlet fever—with this result, that it not only arrests the fever, but it prevents the desquamation of the skin, or arrests it to such an extent that only a slight scurfiness of the skin of the hands and feet arises If such be found to be invariably the case, will the bacilli of scarlet fever be found in the skin at all, and, if not, will not the infectious period of scarlet fever be thereby reduced to a few days only, and will not the sequelæ of scarlet fever be absolutely prevented?

The biniodide can be administered in the form of a pill, or as a mixture of the liq hyd perchloridi c pot iodid The only drawback to its use which I have at present found is that if it be given before the diagnosis is absolutely certain, the physician will be apt to think, when he finds no desquamation taking place at the usual time, that the case was not one of scarlet fever The drug prevents the desquamation of the epithelium of the tongue, as well as of the skin, and the throat rapidly heals under its use

The benefit to be derived from the use of biniodide is far-reaching if it is reliable in all cases, for it not only prevents the desquamation of the skin, and thereby probably prevents the major part of the infectious nature of scarlet fever, but it will probably also be found that it obviates the necessity of keeping patients in bed for three weeks, which is the only safe rule hitherto, and isolated for five or six weeks, and will prevent the occurrence of the much dreaded sequelæ —*British Medical Journal*, July 9, 1887

DIAGNOSIS OF BEGINNING CARCINOMA OF THE CERVIX —Admitting the difficulties in the way of an accurate diagnosis without the aid of the microscope, STRATZ holds that such a diagnosis is not impossible He gives the following as the principal diagnostic points

1 The diseased part is in sharp contrast to the surrounding healthy tissue

2 A difference in level between the diseased and the sound parts can always be seen

3 The carcinomatous spots are always characterized by a light yellow color

4 The malignant portions exhibit small, yellowish white, shining elevations, at least in some parts —*Centralblatt fur Gynak*, No 19, 1887

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, JULY 23, 1887

THE REPORT ON ANTI-RABIC INOCULATION

Almost simultaneously with the report of the British Commission of Inquiry into M Pasteur's Treatment of Hydrophobia, which has just appeared, comes a book entitled "M Pasteur et la Rage," by Dr Lutaud, editor of the *Journal de Medecine de Paris,* and as if to make the subject more complete up to date, the *British Medical Journal* of July 2 contains a letter from M Pasteur to the Imperial Royal Society of Vienna, concerning the recent publication of Dr von Frisch on Hydrophobia The British Commission consisted, it will be remembered, of Sir James Paget, Sir Joseph Lister, Sir Henry Roscoe, M P, Dr Richard Quain, Dr Lauder Brunton, Professor Burdon Sanderson, Dr George Fleming, Principal Veterinary Surgeon of the British Army, and Mr Victor Horsley, Professor Superintendent of the Brown Institution

There is a good deal of difference between the report of the Commission and Dr Lutaud's book The one is the result of calm, deliberate, scientific work, the conclusions being based on *facts,* many of them being acquired by patient experimentation Certain members of the Commission visited Pasteur's laboratory and investigated a series of his cases, and the report is founded upon their observations, upon the opinions and statistics published by M Pasteur, and upon experiments made for the Commission by Mr Victor Horsley Two rabbits inoculated by Pasteur were taken from Paris to the Brown Institution, where, within a week, each developed the symptoms described as caused by rabies in rabbits It was now necessary to prove that this disease was communicable, and that it was rabies Without going into the details of the experiments, suffice it to say that they confirmed "the statement that the virus was contained in the spinal cord, that it could be transmitted without essential change by inoculation, that it was rendered more intense by transmission through rabbits, and that it might manifest itself either in the furious form commonly seen in dogs, or in the paralytic form usually seen in rabbits, or in intermediate forms, but that the disease was always the same—always true rabies" Pasteur's preliminary observations were thus proved to be correct, and the ground cleared for the experiments to test the claim that the virus could be so attenuated as to be inoculated without danger to animals, and that, when correctly used, it protects dogs against the effect of subsequent rabic inoculation Mr Horsley's investigations on this point also give sufficient evidence to show that Pasteur's claims are valid

And now as regards the mortality of persons treated by Pasteur's method The Commission, after taking account of sources of error in the statistics analyzed, conclude that the analysis is entirely in Pasteur's favor, they conclude that the method has saved a number of lives, "and that it is at present, and probably will be for long," the only mode of saving from death those who have been bitten by a rabid dog As regards the alleged dangers of Pasteur's method, as asserted by many of his opponents, the Commission decide in favor of Pasteur For an abstract of the report of the Commission the reader is referred to the "Special Article," immediately following the editorial columns in this issue Dr Lutaud's "M Pasteur et la Rage" is not worthy of an extended notice That he should have written a book of 458 pages to prove that some one else is a charlatan, and this without making any experiments, is of itself sufficient to show that Dr Lutaud is not an impartial critic In the absence of detailed experiments it would scarcely require so much writing to prove or disprove a theory, provided the critic were impartial

In his letter to the Medical Society of Vienna, Pasteur gives his special attention to von Frisch, as Gamaleia, of Odessa, has already pointed out the errors of De Renzi, Amoroso and Abren in the *Annales de l'Institut Pasteur* for March 25 Von Frisch, not very long after his return to Vienna from Pasteur's laboratory, published a communication on anti rabic inoculation, in which he claimed the initiative of anti rabic inoculation on dogs after they had been infected "subdurally" with street-rabies, whereas Pasteur says that he mentioned this very

matter to von Frisch when he was in Paris, and also mentioned them at the von Frisch's visit to Burdon Sanderson, Horsley and Gamaleia It will be remembered that von Frisch claimed that only by this method of infection, by "subdural" inoculation of street rabies, followed by anti rabic inoculation, was anyone in a position to form a judgment as to the value of Pasteur's work Pasteur claims that this statement is inexact, and Bardach, of Odessa, has confirmed the correctness of Pasteur's statements and results in this matter by ten successes out of fifteen experiments, Pasteur's statement being that anti rabic inoculation under such circumstances is quite different from anti-rabic inoculation after *subcutaneous* infection with street-rabies Then again, in most of his cases, and until his attention was called to his error, von Frisch used the slow method of inoculation in "subdural" infection, whereas the slow method is inappropriate on account of the quick course in "subdural" infection Furthermore, in his experiments on rabbits and dogs, with the view of ascertaining what influence anti-rabic inoculations, after the intensive method, had without preceding infection of the animals, von Frisch gives inoculation periods which do not correspond with Pasteur's experiments with "*virus fixe*," and he had many deaths from septicæmia, which Pasteur says is incompatible with a careful method of operating, and proof of the inaccuracy of his experiments After Pasteur's letter was read, Dr Ullmann made the following preliminary communication An experimental inquiry which, like that on rabies, requires such exact manifestation and such frequent repetition of the same series of experiments cannot be brought to a useful conclusion in a short time, and this accounts for the fact that I have waited till to day before giving a report to this learned Society the outcome of my experiments The following are my conclusions 1 According to the experiments which I have made, the animals do not die of rabies, owing to anti rabic inoculations 2 Certain animals can be protected against rabies by the anti rabic inoculations 3 The statistics of my anti rabic inoculations on men seem to be in favor of Pasteur's method

CLERGYMEN AND PATENT MEDICINES

It is now eighteen years since the late Dr S D Gross wrote what we believe was the first criticism of the endorsements of patent and quack medicines by clergymen, and of the advertisements of these swindles in religious papers But as the world grows older and, we hope, better, the tendency of clergymen to speak whereof they do not know (in regard to these things) seems to have increased rather than diminished It seems to be a curious coincidence that those clergymen who most frequently endorse patent medicines are those who are known as "popular" ministers, and whose names may be found in many daily newspapers and almost every magazine in the country as endorsing various brands of soap, stoves, pen wipers, and many other articles of which they cannot be supposed to know more than other people

The latest endorsement that we have seen is one of an extensively advertised stuff which has been christened "Vita Nuova," and which is claimed to cure all nervous troubles, dyspepsia, heart disease, sleeplessness, nausea, congestion, malaria, etc It is pleasing to know that it does not cure cancer The following endorsement is from "one of the most eminent divines of our day," says the advertisement, one who adds to his knowledge of "Vita Nuova" the title of "Prof"

DEAR FRIEND MRS AYER You and I have so long been personal friends that I am almost afraid that my regard for you helps make your "Vita Nuova" better than other medicines It finds in my organism an enemy that has "held the fort" for thirty years, but it has already brought me peace and hope It has great merit as a help to nature I am glad it is not a magical compound, nor the juice of some plant found in the heart of Africa by some heaven guided tramp, but is wholly rational and scientific With kindest wishes, your friend, —

"Wholly rational and scientific!" What would be thought of a physician who would publicly endorse a pumping machine as wholly in accord with mechanical laws? Of a lawyer who would display his name in a newspaper as endorsing some new surgical operation or treatment? Just what sensible people think of a clergyman who writes such endorsements as the above

MEDICAL RANK IN THE NAVY

Should this country become involved in a naval war, even with better war vessels than it now has, the service would be in an embarrassing position on account of the condition of the medical corps of the Navy A few months ago we called attention to the following paragraph in the "Report of the Surgeon-General of the Navy "Its vacancies have not been filled for several years, resignations, deaths, and retirements having depleted it more rapidly than candidates have been obtained It is impossible, with the present inducements offered, to find young men possessing the necessary qualifications who are disposed to become medical officers of the Navy

The Army Medical Department has qualified applicants far in excess of its needs, attracted by better pay, well defined rank, and more satisfactory professional position Since 1870 more than thirty young medical officers have resigned (three of them to enter the Army Corps) "

A very similar condition of affairs, so far as rank is concerned, now obtains in the British Army Relative rank has been abolished, and the profession of almost the whole British Empire is justly indignant And in regard to the condition of affairs in our Naval Medical Corps we may quote from an editorial in the *British Medical Journal*, of July 2 "Is it a wise and statesmanlike proceeding, all other considerations apart, to leave this wrong without a remedy? There can be but one answer to this question It is not wise, it is not statesmanlike Is it good to lower the self respect of the service? Is it good for the health and efficiency of the most costly army in the world, so to treat its officers as to scare from its ranks the very men a wise Minister should do all he reasonably can to attract into it?"

MEMBERSHIP IN THE CONGRESS —The Secretary-General of the Congress is prepared to promptly furnish all persons in other countries applying to him for registration, with a certificate of which the following is a copy

NINTH INTERNATIONAL MEDICAL CONGRESS
WASHINGTON, D C , 1887

Office of the Secretary General

This Certifies, That

is a Member of the Ninth International Medical Congress, and (with the members of his family), is entitled to the special rates of transportation to and from the Congress

JOHN B HAMILTON,
Secretary General

By

DUTY ON EXHIBITS FOR THE CONGRESS —In another column of this issue of THE JOURNAL will be found an important official letter from the Secretary of the Treasury of the U S , answering the many questions heretofore asked in reference to how far members of the International Medical Congress to convene in Washington, September 5, 1887, coming from other countries, could bring with them instruments, books, maps, or other materials to be used for illustrations in the work of the Congress, free from revenue taxes Our foreign exchanges would confer a favor by calling the attention of their readers to the facts stated in the letter

A VACANCY IN THE ILLINOIS STATE BOARD OF HEALTH —It has been announced in the daily papers that Dr George N Kreider, of Springfield, on the 18th inst sent his resignation to the Governor as a member of the State Board of Health, to take effect as soon as his successor was appointed and qualified No reasons are given for such resignation

SPECIAL ARTICLE

REPORT ON PASTEUR'S TREATMENT OF HYDROPHOBIA

[The report of the committee of the Local Government Board, appointed in April, 1886, to inquire into M Pasteur's treatment of hydrophobia, was presented to Parliament on June 27. We are indebted *The Lancet*, of July 2, for the following abstract of the report]

The report commences by stating that it was found necessary that some of the members of the committee should, together with Mr Victor Horsley, the secretary, visit Paris so as to obtain information from M Pasteur himself, to observe his method of treatment, and investigate a considerable number of cases of persons inoculated by him, and, further, that a careful series of experiments should be made by Mr Horsley on the effects of such inoculation on the lower animals Mr Horsley's experiments are stated to entirely confirm M Pasteur's discovery of a method by which animals may be protected from the infection of rabies If a dog, rabbit, or other animal be bitten by a rabid dog and die of rabies, a substance can be obtained from its spinal cord which, being inoculated into a healthy dog or other animal, will produce rabies similar to that which would have followed directly from the bite of a rabid animal, or differing only in that the period of incubation between the inoculation and the appearance of the characteristic symptoms of rabies may be altered The rabies thus transmitted by inoculation may, by similar inoculations, be transmitted through a succession of rabbits with marked increase of intensity But the virus in the spinal cord of rabbits that have died of inoculated rabies may be gradually attenuated by drying the cords, so that after a number of days' drying, it may be injected into healthy rabbits or other animals without any danger of producing rabies, and by using on each successive day the virus dried during a period shorter than that used on the previous day an animal may be made almost certainly secure against rabies, whether from a bite or from any method of subcutaneous inoculation, and this protection is proved by the fact that if animals so protected and others not thus protected be bitten by the same rabid animal, none of the first set will die of rabies, and, with rare exceptions, all of the second set will succumb

It may hence be deemed certain that M Pasteur has discovered a method of protection from rabies comparable with that which vaccination affords against infection from smallpox It would be difficult to over estimate the importance of the discovery,

whether for its practical utility, or for its application in general pathology It shows a new method of inoculation, or, as M Pasteur sometimes calls it, of vaccination, the like of which it may become possible to employ for protection of both men and domestic animals against others of the most intense kinds of virus The duration of the immunity conferred by inoculation is not yet determined, but during the two years that have passed since it was first proved there have been no indications of its being limited The preventive treatment adopted by M Pasteur is based on the foregoing experience, but the determination of the success of the method is far from easy, owing to—(1) the difficulty of determining whether the bites were really those of rabid animals, (2) the probability of hydrophobia in persons bitten by dogs that were certainly rabid depending very much on the number and character of the bites, whether they were on exposed parts or parts protected by clothing, and in all cases in the amount of bleeding, (3) in all cases the probability of infection may be affected by speedy cauterising or excision of the wounded parts, or by various washings, or other methods of treatment, (4) the unequal danger of bites of different species of animals, and even of different dogs In some groups of cases the percentage of deaths among persons bitten by dogs believed to have been rabid has been estimated at only 5 per cent, in others at 60 per cent, and the mortality from the bites of rabid wolves has been variously estimated at from 35 to 90 per cent

By the courtesy of M Pasteur, the committee were enabled to personally investigate ninety cases treated by him, these being mostly those which had been earliest treated, in which the periods since inoculation were longest, and living within reach in Paris Lyons, and St Etienne Among the ninety cases there were twenty four in which the patients were bitten on naked parts by undoubtedly rabid dogs, and the wounds were not cauterized or treated in any way likely to have prevented the action of the virus, there were thirty one in which there was no clear evidence that the dog was rabid, others in which the bite had been inflicted through clothes It is estimated, from experience of the result of bites in other cases, that had they not been inoculated, not less than eight among these ninety persons would have died Not one of them has shown since the inoculation any signs of hydrophobia

Since, in order to quiet fears, M Pasteur has been obliged to inoculate many in whom there was no satisfactory evidence that the bite was that of a rabid animal, it might be unjust to estimate the total value of his treatment in the whole of his cases as being more than the rate of mortality observed in them compared with the lowest rate observed in any large number of cases not inoculated This lowest rate may be taken at 5 per cent, and, as between October, 1885, and the end of December, 1886, M Pasteur inoculated 2,682 persons (including 127 from this country), the mortality should have been 130 But at the end of 1886 the number of deaths was 31, including 7 bitten by wolves, in whom the symptoms of hydrophobia appeared while they were under treatment, in fact, the actual percentage of mortality was betweeen 1 and 1 2, showing, on the lowest estimate, the saving of not less than 100 lives Of 233 persons bitten by animals in which rabies was proved, only 4 died Without inoculation, at least 40 would have died Among 186 bitten on the head or face by animals in which rabies was proved, only 9 died, instead of at least 40 Of 48 bitten by rabid wolves, only 9 died, instead of nearly 30 Between the end of last December and the end of March, M Pasteur inoculated 509 persons bitten by animals proved to have been rabid, only 2 have died, one of these, bitten by a wolf a month before inoculation, dying after only three days' treatment The committee think it, therefore, certain that the inoculations practiced by M Pasteur have prevented the occurrence of hydrophobia in a large proportion of those who, if they had not been so inoculated, would have died of that disease And his discovery shows that it may become possible to arrest by inoculation, even after infection, other diseases besides hydrophobia His researches have also added very largely to the knowledge of the pathology of hydrophobia, and supplied a sure means of determining whether an animal which has died under suspicion of rabies was really affected with that disease or not

The question whether the method itself entails risk to health or life is then discussed, the distinction between the ordinary method and the "intensive" method being pointed out By the first method there is no evidence or probability of any danger to health at all, but after the intensive method, which is only practiced in the most urgent cases, deaths have occurred which might possibly be attributed to the inoculation rather than to the original infection Yet in the worst cases the intensive method is relatively more efficacious than the ordinary method, nor is the rate of mortality greater after the former method than after the latter Certain cases, one of which is detailed, have, however, excited suspicion from the mode of death The case related is that of a man bitten by a rabid cat at the Brown Institution, treated by M Pasteur the next day by the intensive method, continued during twenty-four days, and dying about a month later with symptoms of acute ascending paralysis The man was very intemperate, and had been exposed to chill while crossing the Channel on his way home Mr Horsley proved that his death was due to the virus of rabies, by using a portion of his spinal cord for the inoculation of rabbits and dogs, who died with characteristic signs of paralytic rabies such as usually occurs in rabbits Yet it is by no means certain that the fatal issue in this and in other cases treated by the intensive method was not due to the original infection M Pasteur has, however, greatly modified this plan of treatment, which he employs in none but the most urgent cases

The final paragraphs of the report, which embody practical suggestions, may be given *in extenso*

The consideration of the whole subject has naturally raised the question whether rabies and hydrophobia can be prevented in this country If the protection by inoculation should prove permanent,

the disease might be suppressed by thus inoculating all dogs, but it is not probable that such inoculation would be voluntarily adopted by all owners of dogs, or could be enforced on them Police regulations would suffice if they could be rigidly enforced But to make them effective it would be necessary (1) that they should order the destruction, under certain conditions, of all dogs having no owners and wandering in either town or country, (2) that the keeping of useless dogs should be discouraged by taxation or other means, (3) that the bringing of dogs from countries in which rabies is prevalent should be forbidden or subject to quarantine, (4) that in districts or countries where rabies is prevalent the use of muzzles should be compulsory, and dogs out of doors, if not muzzled or led, should be taken by the police as "suspected" An exception might be made for sheep dogs and others while actually engaged in the purposes for which they are kept There are examples sufficient to prove that by these or similar regulations rabies, and consequently hydrophobia, would be in this country "stamped out," or reduced to an amount very far less than has hitherto been known If it be not thus reduced, it may be deemed certain that a large number of persons will, every year, require treatment by the method of M Pasteur The average annual number of deaths from hydrophobia during the ten years ending 1885 was, in all England, 43, in London alone 8 5 If, as in the estimates used for judging the utility of that method of treatment, these numbers are taken as representing only 5 per cent of the persons bitten, the preventive treatment will be required for 860 persons in all England, for 170 in London alone For it will not be possible to say which among the whole number bitten are not in danger of hydrophobia, and the methods of prevention by cautery, excision, or other treatment cannot be depended upon

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, April 6, 1887

THE PRESIDENT, JOS TABER JOHNSON, M D, IN THE CHAIR

DR SWAN M BURNETT presented a specimen and gave the history of a case of

EXTRACTION OF BLACK CATARACT FROM THE ANTERIOR CHAMBER

The patient, a woman of 39, but who looks to be 45, was seen by him several months ago She reports that for several years she has been blind in the right eye, and that now she could not see with the left eye For several months she has suffered great pain in the left eye Examination proved that there was a black cataract in each eye, and that the lens of the left eye was dislocated into the anterior chamber This is a serious complication and usually means enucleation, but extraction is sometimes possible She was sent to the Garfield Hospital and the operation of extraction was performed under general anæsthesia The danger in this condition is that the lens will slip back into the posterior chamber To prevent this escape the "bident" of Dr Agnew, of N Y is used This consists of two fine needles, mounted close together in a handle, which are struck through the cornea behind the dislocated lens, thus preventing its slipping backwards In this case the bident being an imperfect one, he could not use it Although the anterior chamber of the left eye was full of blood he made a slight incision, as for cataract, and enlarged it with the scissors that he might not disturb the lens

There was no escape of the vitreous humor, and the woman is now doing well There appears to be two forms of this peculiar cataract, c nigra and c pigmentosa This latter form usually consists of a deposit of pigment in the lens proper, but that has been proved not to be so in his two cases

DR BURNETT presented a specimen of

BONY FORMATION IN THE EYE

The patient, a male, was injured in the right eye by some blunt instrument about seventeen years ago The sight was not at first impaired, but repeated attacks of inflammation with great pain compelled him to seek advice from a doctor After a few weeks treatment the right eye was no better, and the left eye began to hurt him Dr Burnett sent him to the Garfield Hospital, and under general anæsthesia he found that the right eye was deformed and hard, and that there was iritis of the left eye He enucleated the right eye and performed iridectomy on the left The left eye is still much inflamed and it is probable that he will never be able to see out of it The inflammation is undoubtedly sympathetic from the long continued trouble in the other eye, and if the right eye had been removed sooner it is probable that the left could have been saved

There is no doubt that the deposit is bone, but it is in rather an unusual place, being in the choroid, and occupying the place of the vitreous humor

DR D S LAMB also presented a specimen of

BONY FORMATION IN THE EYE

Dr Lamb said that the case was similar to Dr Burnett's, only he did not know the history as the eye was removed at an autopsy upon a man of 75 He believed that the trouble began with an injury The eye is shrunken and the bony formation is cupped in front where the crystaline lens lay The left eye showed sympathetic inflammation with opacity of the cornea

DR LACHLAN TYLER read a paper entitled

DIPHTHERIA AND TRACHEOTOMY,

(which will be published in an early issue)

DR F C FERNALD then read a paper entitled *Three Unusual Cases of Diphtheria*

FOREIGN CORRESPONDENCE

LETTER FROM GOETTINGEN [1]

Koenig and Rosenbach—Goettingen Polyclinic—Empyema—Amputation of Thigh for Osteomyelitis

My Dear Dr Fenger —In my last letter I promised to relate to you this time the results of my observations in Goettingen You are aware that in our weekly colloquium at your house after my lectures Friday evenings, we have mentioned the names of Koenig and Rosenbach perhaps more frequently than the names of any other two surgeons This was not accidental by any means, as Koenig occupies by common consent a foremost position in the list of the most prominent surgeons of Germany, a distinction he well deserves as the author of the best text-book on surgery, as a clear and impressive teacher, as an accurate clinical observer, as a bold and successful operator, and last, but not least, as a perfect type of a gentleman, while the name of Rosenbach is intimately associated with the scientific part of surgery, more especially the etiology of suppuration, the nature of osteomyelitis and the microbic origin of tetanus Ogston and Rosenbach, who have both distinguished themselves by their investigations concerning the influence of pus microbes in the causation of suppuration, resemble each other very closely in many respects Both are about the same age, both are hard and enthusiastic workers, and both are extremely modest men There is perhaps not a second medical school in the world where the teachers of surgery work more harmoniously and efficiently than in Goettingen Koenig, still active and energetic, perfectly familiar with surgical literature and with an enormous clinical experience, teaches practical surgery in such a manner that students become fascinated in the subject and perfectly grounded in this part of their professional study, while Rosenbach, who looks at everything from a scientific standpoint, stimulates students by his own example and teaching to follow him through the most profound and difficult topics in surgical pathology A student who graduates from this university should be a good surgeon, and if this is not the case he has certainly not made the best of his opportunities Soon after my arrival in Goettingen Prof Rosenbach called on me at the hotel, and after a pleasant chat we called on Prof Koenig at his own house We found him in his study dressed in a hunting jacket, surrounded by books, pamphlets and journals Behind his desk I noticed an extensive collection of smoking pipes systematically arranged on a rack The collection embraced large pipes and small pipes, pipes with short stems and pipes with long stems, meerschaum pipes and porcelain pipes, and each specimen presented evidences that this array of pipes was not intended for ornamental purposes, but for comfort and enjoyment during the long hours devoted to literary study and work Prof Koenig is now 57 years of age, in vigorous health both mentally and physically The tooth of time has claimed the hair on the top of his head, but otherwise has produced no visible effects He is a little above average height, compactly built, with a well shaped head and intelligent face, which under all conditions and under all circumstances is expressive of great determination He is a great hunter, and when he feels himself worn out and tired he finds healthful recreation on his hunting grounds in following the hare or the nobler game in the mountains I found him a most genial gentleman, always anxious to learn himself when brought in contact with others, and ever willing to impart knowledge to all who came to him for this purpose I remained three days in Goettingen, and it would be difficult to imagine a place where I could have employed my time in a more interesting and profitable manner The General Hospital is an old building, but the surgical wards are comfortable and afford room for 120 patients As the city is small, cases of accident are few, but the wards are filled with patients suffering from all kinds of tubercular affections, tumors and deformities The operating room is small but fully equipped with all modern improvements for the antiseptic treatment of wounds The supply of instruments in this klinik is characteristic Prof Koenig makes it a rule to perform operations with few and very simple instruments An examination of the drawers containing the instruments reminded me of a carpenter shop, as they contain a good assortment of carpenter's chisels and mallets, common drills for perforating bone, ordinary large scissors for cutting gauze and bandages, small saws and large saws, and large scissors for cutting bone which are used in the vineyards for pruning purposes, spring forceps with sharp teeth is used in preference to other forms of hæmostatic forceps, sharp spoons, from the smallest size to near as large as the palm of the hand, are present in large numbers, and suggest the frequency with which tubercular lesions are submitted to operative measures, most of the larger spoons are fenestrated Corrosive sublimate is used for irrigation, and sublimated gauze for dressing

Professor Rosenbach has charge of the polyclinic where every forenoon a large material is presented and where numerous minor operations are performed and proper material for the hospital selected The result of my observations have satisfied me that these polyclinics are not sufficiently frequented by the students The average medical student has an intrinsic desire to witness capital operations, and does not take sufficient interest in minor cases When we recollect that only a fractional number of the thousands of medical students really become surgeons, but that all will have to depend in their future practice for their daily bread on the treatment of small, to them now unimportant things, it becomes evident that a grave mistake is committed in not making the attendance of polyclinics compulsory and a part of the curriculum of study Teachers of surgery, as a rule, are only happy when they can present to their classes interesting, rare cases, or perform capital operations, and often deem it beneath their dignity to consume an occasional hour in the discussion of a contusion, a furuncle, a paranitium, a wart, or some other

[1] By permission of Drs Fenger and Senn

insignificant topic that nevertheless may affect the comfort and happiness of patients who will seek not the distinguished surgeons of metropolitan cities for relief, but who will apply for treatment to their family physicians Many distinguished operators who perform the most difficult and critical operations in a perfect and blameless manner have been known to treat unimportant cases badly The clinical teacher who complains of a lack of material is always hunting up big cases, and is only contented when he finds a case of stone, an abscess of the brain or lungs, an aneurism of some large artery, or some other pathological condition which will necessitate a brilliant operation, which perhaps not one of his students will ever be called upon to perform

Men like Rosenbach can make a polyclinic what it should be—a stepping stone, a preparatory course to the regular surgical clinic During one forenoon a lad was brought into the polyclinic suffering from great dyspnœa, with a history that he had been ill for several weeks He had been treated for pleuropneumonia, and as resolution did not set in at the right time, different counter irritants were applied successively without producing the desired effect A physical examination of the chest revealed the existence of a copious effusion into the left side of the chest, which dislocated the heart so that the apex beat could be distinctly seen under the nipple on the right side The diagnosis of empyema was made without resorting to an exploratory puncture, from the history of the case and signs and symptoms which were presented at the time As further loss of time was considered dangerous, the radical operation was performed at once by Prof Rosenbach Chloroform was administered and about an inch of the fifth rib in the axillary line resected subperiosteally, the pleura incised and the cavity drained At least two quarts of pus escaped No irrigation, a copious dry sublimated gauze dressing

During the same forenoon, in the absence of Prof Koenig, an amputation was made by Dr Mueller, first assistant of the surgical clinic As this case is of great interest from a clinical and pathological standpoint, I will give it somewhat in detail The patient was a man about 35 years of age who, without any apparent cause, was attacked four weeks ago with acute osteo myelitis of the tibia As soon as he was brought into the hospital, about a week after the commencement of the attack, Prof Koenig chiseled the entire shaft open, and found that the disease had involved the ankle joint, which was opened and drained at the same time The knee joint was greatly swollen, and, as no direct communication could be traced between it and the suppurating medullary canal, it was explored and, as pus was found, it was incised and drained As this extensive operation did not succeed in reducing the temperature or otherwise improving the general condition of the patient, amputation was advised as the only means to fulfil an *indicatio vitalis* The operation was rendered nearly bloodless by elevation of limb and circular elastic constriction of upper portion of thigh Antero posterior cutaneous flaps were made, and the cut surface of the bone covered with a cylindrical periosteal flap One deep catgut suture was introduced to prevent muscular retraction A large gauze drain was introduced transversely in the wound, over which the skin flaps were fastened with only two sutures Accurate suturing of wounds is considered as unnecessary, and often as injurious, in this clinic It is claimed that when only few sutures are used better drainage is secured, and the wound heals as kindly and with as good a cicatrix as after the most careful suturing Unless contraindications arise the first dressing is allowed to remain for a week, when the drain is removed, after which the wound heals rapidly by granulation The thick gauze compress is covered with wax paper as an impermeable covering Before each operation the blades of the instruments are thoroughly wiped with an aseptic cloth, and their handles washed with a 4 per cent solution of carbolic acid N SENN

(*To be concluded*)

LETTER FROM PARIS

(FROM OUR OWN CORRESPONDENT)

Incompatibility of Calomel and Bromide of Potassium—Bergeon's Method—Inconveniences of Iodoform—Cocaine Accidents

In a note by M Pierre Vigier in the *Gazette Hebdomadaire* the author brings to notice the incompatibility of the bromide of potassium and calomel If, states the author, a few drops of a concentrated solution of the iodide of potassium be poured on calomel, the latter becomes green, that is to say, the mixture becomes a proto iodide of mercury This incompatibility is well known, and consequently great care is taken that these salts are not prescribed together, nor even after a short interval between them The same precautions should be taken with the bromide of potassium, though the reaction between it and calomel is less than that between the latter and the iodide of potassium Owing to the knowledge of this fact no medical man would prescribe the two drugs together, nor would he leave an interval of less than five or six hours between their administration, but cases may present, convulsions in children in instance, in which two physicans may have been called in successively, and where the first having prescribed calomel, the other would prescribe the bromide of potassium The serious accidents that may result from this medication may well be imagined, and this is one reason why M Vigier thought it necessary to bring it before the profession

Dr Desplats, of Lille, has reported to the medical society of that town that of five phthisical patients that he had submitted to the method of treatment by gaseous enemata, the results were as follows Three completely unsuccessful, relief of the dyspnœa in one case, and in one instance only has there been a rapid improvement in the general state of the patient This patient, however, had, at the time the treatment was employed, an attack of pleuro pneumonia, and the defervescence coincided with the application of that treatment, which Dr Desplats considers quite inefficacious in any form of pulmonary phthisis, and much more so in the acute form

The gaseous enemata have, however, an immediate action the relief of the dyspnœa in relation to the influence exercised on the bulb by the carbonic acid and to the experiments of Professor Brown Séquard, and a tardy action, attributed by some to the sulphuretted hydrogen and the sulphuret of carbon, and by others to the carbonic acid the sulphur waters contain The general impression among the profession in this country is that the treatment of phthisis by Bergeon's method does not possess sufficient advantages to supersede the other methods in vogue, though it may be employed as a simple palliative But even this property will not counterbalance the drawbacks of the method, to wit, the inconvenience that patients are put to by the frequent use of the enema, and their exposure to the risk of entero-colitis, which has been attributed to it

Iodoform is an agent very much in vogue internally, as well as externally, as an anti parasitic and antiseptic Dr A Poncet, of Lyons, in a paper read before the surgical society of that city, related the inconveniences arising from dressings with that substance Iodoform excites, particularly in women, an anorexia, the more intense according as the habits of the patients are more civilized or refined The odor itself is a great drawback, and however the drug may be disguised it is always readily recognizable The patients lose all taste for food, which is attributed to the presence in the saliva of iodides and of alkaline iodates Dr Poncet remarks that the buccal cavity is probably not the only medium of the elimination of iodoform, the intestinal mucous membrane and the kidneys serve as emunctories The odor of this substance is often recognized in the sudorous secretions The author points out the affinity that silver has for this substance, so much so that all utensils composed of this metal and used by patients saturated with iodoform become infected with the peculiar fœtid and garlic odor, in consequence of which patients who are acquainted with this fact, adopt iron spoons and forks instead of silver In patients under treatment with iodoform, but who are not yet saturated with it, the peculiar odor of the drug may nevertheless be developed by simply placing a piece of silver in contact with the saliva of the patient, then rubbing it with a piece of linen, the metal gives out the well known odor This the author terms the *signe de l'argent* The researches of Dr Cazeneuve show that the garlic odor disengaged by silver in contact with iodoform is due to the production of the iodide of silver with the formation of acetylene

As every medal has its reverse so has cocaine, so much vaunted lately It has rendered great service in a variety of circumstances for the prevention and relief of pain, but several severe accidents having occurred by its administration Dr Dujardin Beaumetz has thought proper to publish in the *Bulletin de Therapeutique* a paper communicated by Dr Bignon, of Lima, who gives the following results of a series of experiments performed by him on man and dogs with cocaine 1 Cocaine produces only physiological effects, which are very transitory, in doses of from 30 to 50 centigrammes administered by the stomach, on condition that the drug be absorbed in divided doses of five centigrammes every hour 2 It acts principally on the renal secretion in retarding it, in preventing the elimination partly of the products of oxidation, and in then producing the first symptoms of slight uræmia 3 In a single large dose it produces anuria followed by grave uræmic accidents (nervous convulsive attacks etc) 4 This paralyzing action of cocaine on the kidneys generally disappears two or three hours after the absorption of the alkaloid It is followed by a considerable diuresis which relieves the organism, and which is the more active according as the anuria had been much prolonged 5 Cocaine is toxic only in an indirect manner when the dose is sufficiently high to prolong anuria, to the extent of the accumulation of toxic products of the urine, in sufficient quantity to produce symptoms of uræmic poisoning 6 If the diuresis should make the toxic phenomena to disappear rapidly, the general stimulating action continues none the less for a long time afterwards It lasts about twenty four hours at fifty centigrammes in the day During all this time the phenomena of oxidation continue to go beyond the normal average, denutrition, in a word, continues To sum up, cocaine acts in two ways 1 In diminishing the renal secretion, and, if the dose is sufficiently high, in suppressing it during a sufficient time to produce the gravest uræmic accidents, and even death in a very short time 2 In hastening nutrition, and then the production of the products of disassimilation or of oxidation If, then, the dose is high, the two actions combining contribute to cause death in a very little time by uræmic accidents If, on the contrary, the doses are divided, they leave between each the necessary time for the reaction (diuresis), and death will only be the consequence of prolonged exhaustion and decentration A B

DOMESTIC CORRESPONDENCE

BERGEON'S METHOD

Dear Sir —In THE JOURNAL of June 18, 1887, p 676, in the body of the "Address in Medicine" by Dr J S Lynch, I find the following (I do not wish to be regarded as a champion of the Bergeon treatment of tuberculosis)

> For, admitting all that is claimed as to the agency of microbes in setting up and keeping up disease processes, it must be remembered that they are biologically as high in the plane of life, and if all experiments can be believed, have a higher resisting power than the cells which compose the living elements of our tissues *Any germicide therefore, which can destroy the one, must inevitably destroy the other*

I am of the opinion that the above reasoning is faulty and would lead young practitioners astray In vol xvii, page 662, Ziemssen's Cyclopædia of Practice of Medicine we find the following "*Cases of* poisoning have also been recorded, from human beings eating the flesh of animals, which had fed upon belladonna leaves without danger to themselves, among the animals to which atropia is innocuous are

rabbits, pigeons, rats and guinea pigs" Snails are also said not to be affected by it

We have been informed that sulphate of strychnia, in the dose of thirty to sixty grains will not kill a hog It must also be a patent fact that solanine will not kill potato bugs, while it is certain to kill a man We also wish to call attention to the fact that the dose of veratrum viride that would be harmless to a white man, would be a very dangerous one to give a negro It is also known that on the other hand santonine is practically non poisonous to the human family, while it readily kills intestinal parasites

I do not wish to plead for or against the treatment of tubercle by gaseous enemeta but from Dr Lynch's remarks I believe that he has placed the cart before the horse, as you read from line 19, page 676, of THE JOURNAL

Even then, admitting that his mixed gases can destroy the microbes, which seems highly improbable, in view of the fact that, they are continually exposed to an atmosphere so highly charged with *carbonic dioxide* that its retention in the lungs for five minutes will produce unconsciousness, it is not clear how they are to reach the objects intended to be destroyed

If I understand the theory set forth by Bergeon, it is the sulphuretted gases that do the work, and the carbon dioxide is used as a diluent to carry the sulp hydric acid gas to the scene of trouble in such con dition that it shall not cause erosion of the mucous membrane of the bowels or other tissues with which it may come in contact

In the treatment of pulmonary tubercle, who has seen any marked effect from any kind of treatment? Let us be cautious in making experiments with this plan of treatment, and if any benefit can be secured from the so called gaseous enemata we would like to know it, if not, lay it away in its sarcophagus to rest with the dead

I think Dr Lynch would have us believe that what is life to one, is life to all, and that that which will kill one form of animal life will kill all forms But as a matter of fact this is far from being true, as will be seen from the above quotations Even among pa tients in the same family, we find that that which will favor life and health in one member, if continued, would produce disease and ultimately death in an other of the same blood Why it is we do not know The unknown quantities in the equation of life as yet have not all been solved, and much may be learned from empiricism ORSON MILLARD, M D

Flint, Mich., June 27

POISONING BY POKE ROOT

Dear Sir —On the evening of March 25, 1887, I was called in haste to see J H , a stout, muscular colored man, 39 years of age, who was said to have been suddenly attacked with "vomiting and cramps in his bowels" I obtained the following history from him In the afternoon an old vender of domestic medicines was in the city, with among other things, a large quantity of poke root, which he said was good when put in whiskey to purify the blood My patient asked him if it was not good to chew also, and upon receiving an affirmative answer, placed a small piece—probably ʒj or ʒij—in his mouth and began to chew it and swallow the juice This was about 3 30 P M About one hour later, being thirsty, he drank a pint of cold water and shortly afterwards nausea set in, soon followed by vomiting, at first of the contents of the stomach and then of a greenish colored and very bitter fluid He continued to vomit frequently till 7 P M when he began to have severe pain in his bowels, accompanied by free purgation and hematemesis

When I first saw him, at 7 30 P M , he complained of heaviness in the head and dizziness, was suffering severely from pain in the abdomen, and said he felt as though there was a hard lump in his stomach He was considerably prostrated and sweating freely, pulse 90, soft and compressible At 8 P M I gave him subnit bismuth, gr x, morph sulph gr ⅓, and ordered it to be repeated in half an hour if he obtained no relief and also to have hot, dry woolen cloths applied to his abdomen, and allay his thirst with mucilaginous drinks At 9 P M I saw him again He was a little easier, but had vomited three times in the interim, and each time a considerable quantity of blood I now gave him morph sulp gr ¼ dissolved in a little cold water, after which the pain soon subsided He vomited twice during the succeeding hour, then fell asleep and awoke the next morning comparatively well ALEXANDER GUTHRIE, M D

Cairo, Illinois

TREATMENT OF DYSPEPSIA

Dear Sir —In THE JOURNAL of July 2 is an article giving Dr Talma's treatment of dyspepsia with hydrochloric acid For the last twelve years I have met with almost unlimited success in treating dyspepsia with this agent, though I perhaps use it in stronger solution than Dr Talma I use it in the proportion of about ʒij nitro muriatic acid to ʒiv water, believing that the combination of the two acids is better than one alone I invariably give the solution in tea spoonful doses immediately after meals I have treated some of the most severe cases, and have cured some of the most obstinate, with this combination

When the heart is sympathetically affected I have used tinct digitalis, gtt v–vj, three times a day with good results

When there is constipation I have of late had excellent results from a combination of cascara sagrada and fluid extract juglans cinerea, teaspoonful three times a day I insist that my patients should abstain from tea and coffee, and use either water or milk, especially buttermilk, which seems to have an excellent effect upon the stomach and alimentary canal generally, giving health and vigor to the absorbent vessels

When there is much gastric distress after eating a few drops of chloroform will soon relieve the pain

In severe cases of gastralgia there is nothing better, in many cases, than oil of cojeput, gtt v–vj

In cases of vomiting, chloroform has a soothing effect, and sometimes a small dose of morphia has a good effect in quieting the nervous system Or a mustard plaster or horse radish leaves may be used

In some cases in which the patient uses tobacco I forbid it, and the patient gets well without medicine

Harmon, Ill , July 5 WM HENRY, M D

INTERNATIONAL CONGRESS.

GENERAL PROGRAMME OF THE CONGRESS

As there appears to be a very general desire, both at home and abroad, to have the programme of arrangements for the meeting of the International Medical Congress made public, I herewith submit the formula therefor determined upon by the Committee of Arrangements intrusted with that duty

FIRST DAY—MONDAY, SEPTEMBER 5

The Congress will assemble at Albaugh's Opera House at 11 A M, and will be formally opened by the President of the United States, to be followed by a short address of welcome by the Secretary of State, Address by the President of the Congress, Report of Secretary-General and Chairman of Committee of Arrangements Adjourn at 1 30 P M From 3 to 6 P M, meeting of the Sections at their respective halls Evening *conversazione* at U S Pension Hall from 8 to 11 P M

SECOND DAY—TUESDAY, SEPTEMBER 6

Meeting at 10 A M at Albaugh's Opera House General Addresses by Drs Flint and Semmola Sections will meet at 11 A M, and adjourn at the same hour with Congress at 1 P M In the afternoon the Sections will meet from 3 to 6 P M In the evening it is expected that a reception will be given by the President of the United States, and the Corcoran Art Gallery will be thrown open to the members and their families

THIRD DAY—WEDNESDAY, SEPTEMBER 7

The Congress will meet at 10 A M General Addresses until 1 P M The Sections will meet as usual at 11 A M, and adjourn at 1 P M Afternoon meeting of the Sections from 3 to 6 P M Evening reception to the members and their families by the citizens of Washington

FOURTH DAY—THURSDAY, 8TH

General meeting at 10 A M Addresses, if not previously delivered Meeting of the Sections at 11 A M, adjourn at 1 P M Afternoon, Sections meet from 3 to 6 P M General reception buffet banquet at U S Pension Hall from 8 to 11 P M

FIFTH DAY—FRIDAY, 9TH

General meeting at 10 A M Transaction of business affairs of Congress Meeting of Sections at 11, and adjourn at 1 P M Afternoon, Sections meet from 3 to 6 P M

SIXTH DAY—SATURDAY, 10TH

General meeting at 10 A M Adjourn at 11 for visit to Mt Vernon

On Sunday or Monday, the day not yet determined upon, an excursion train will leave Washington with the foreign members and their families for Niagara Falls, under the escort of a part of the committee of arrangements, selecting the route which will afford our foreign brethren an opportunity to see some of the most interesting and thrifty portions of our country, as well as very beautiful scenery

In completing the details of this programme it may be necessary to make some slight modifications

I send herewith an important communication from the Chairman of the Sub Committee on Transportation, Dr J W H Lovejoy

ALEX Y P GARNETT, M D,
Chairman of Committee of Arrangements

RAILWAY RATES TO WASHINGTON.—The Railroad Associations which have already agreed to make a reduction of fare for members of the Congress and their families on the roads under their control are

The Trunk Line Association

The Central Traffic Association

The Newport News and Mississipi Valley Company

The Southern Passenger Association

These cover the greater part of the territory east of the Missouri and Mississipi rivers The whole list of roads controlled by these Associations is too large for publication, but members can obtain all the necessary information by application to the railroad agent at the starting point It will be required to pay full fare to Washington and a return will be allowed for "one-third the highest limited fare" on the Association's certificate It will be necessary for these certificates to be procured before starting and have upon them the receipt of the railroad agent for the full fare to Washington Members intending to attend the Congress should, as soon as possible, make application to the undersigned for blank certificates of the Association over whose roads they intend to travel, and the blanks will be forwarded at as early a date as they can be obtained A separate certificate will be required for each person

J W H LOVEJOY, M D,
Chairman Transportation Committee
No 900 12th St, Washington, D C

DUTY ON EXHIBITS FOR THE CONGRESS

[The following letter from the Secretary of the Treasury to Dr John B Hamilton, Secretary-General of the Ninth International Medical Congress, is of especial interest to our foreign confrères who wish to attend the Congress]

Sir In reply to the inquiries contained in the letter of F H Rehwinkel, M D, referred by you to this department, I have to state that the professional books, implements, instruments, of persons arriving in the United States are exempt from duty under the provisions of the tariff law, which also provides for the free admission of "models of inventions and other improvements in the arts, such as cannot be fitted for use," and that parties arriving from foreign countries for the purpose of attending the Ninth International Medical Congress, to meet at Washington September 5, 1887, and who bring with them their own "surgical or dental instruments, scientific and mechanical appliances, models and materials to be used for clinical demonstration under the direction of said Congress," will be entitled to have the same passed free of duty,

on the usual oath that they are for their personal use and are not intended for sale

As it would appear from the act of Congress relative to said convention that the said Ninth International Medical Congress is a society established for philosophical and scientific purposes—books, maps and charts (not more than two copies in any one invoice), philosophical and scientific apparatus, instruments and preparations, casts, paintings, drawings and etchings, specially imported in good faith for the use of said Congress and not intended for sale, would also seem to be entitled to free entry under the provisions of the tariff act now in force, a copy of which is herewith enclosed (See paragraphs 660, 759 and 815)

Copies of this letter will be transmitted to the Collectors at the principal ports for their information and guidance Respectfully yours,

(Signed) C S FAIRCHILD,
Secretary of the Treasury

BOOK REVIEWS

LEHRBUCH DER KINDERKRANKHEITEN Von Prof DR ALFRED VOGEL in Munchen Neunte Auflage, neu bearbeitet von DR PHILIP BIEDERT, Oberarzt am Burgerspital und Kreizazrt in Hagenau Mit 6 lith Tafeln 8vo, pp xvi 600 Stuttgart Verlag von Ferdinand Enke, 1887

DISEASES OF CHILDREN By PROF DR ALFRED VOGEL, of Munich Ninth edition, newly revised by DR PHILIP BIEDERT, of Hagenau With 6 lithograph plates Stuttgart Ferdinand Enke, 1887 Chicago Koelling, Klappenbach & Kenkel

It is just twenty years since the first edition of this work was issued, and the appearance of the ninth edition now shows that it was not written in vain For several years the book has been favorably known to and received by English reading medical men through translations The very thorough revision to which the book was subjected two years ago by the author has precluded any very essential changes in the present edition For the benefit of those who are not already acquainted with the work the following summary of its contents may be of interest The general part consists of four chapters, which deal with "physiological and anatomical structure of the infantile organism," "general rules for the examination of children," "treatment and medication of children in general," and the "feeding and care of children" The special part consists of nine chapters, dealing with "diseases arising from labor," "diseases of the digestive apparatus," "diseases of the respiratory organs," "of the circulatory organs," "of the nervous system," "of the urinary and genital organs," "of the skin," "general diseases, dyscrasiæ," and "diseases of the organs of locomotion" Professor Vogel's book has passed the stage of criticism, and as 'good wine needs no bush," so it needs neither analysis nor commendation at our hands

ELEMENTS OF PHYSIOLOGICAL PSYCHOLOGY A Treatise on the Activities and Nature of the Mind from the Physical and Experimental Point of View By GEORGE T LADD, Professor of Philosophy in Yale University 8vo, pp xii 696 New York Chas Scribner's Sons, 1887 Chicago A C McClurg & Co

Professor Ladd has set himself the task of putting forth the assured or alleged results of Physiological Psychology, keeping in view the belief that there is no ground for extravagant claims or expectations, and still less ground for any fear of consequences, in the way of falling upon something which would prove that perhaps, after all, man is not a spiritual and rational being The book which he gives us is the first fruit of American work in this field, which covers the whole subject, and with the exception of Wundt (Grundzuge der physiologischen Psychologie), there is no other work at all which even attempts to cover the entire ground How well the territory has been covered is difficult to show in a short notice of a work on so comprehensive a subject Throughout the book it is apparent that the author's aim is to get at the truth, or as near to it as possible, not only by following known roads, but also by exploring unknown by paths It is a most carefully written book, and cannot fail to interest one at all partial to a study of philosophy and of physiology of the mind

ANATOMY, DESCRIPTIVE AND TOPOGRAPHICAL, in 625 Illustrations By CARL HEITZMANN, M D English edition by LOUIS HEITZMANN, M D 8vo, pp xxii 238 270 36 Vienna W Braumuller New York J H Vail & Co, 1887

The fact that more than 30,000 copies of Heitzmann's "Anatomischer Atlas," the basis of this work, have been sold in the last sixteen years in Germany should be taken as evidence that the work is a good one And yet we cannot consider a work on anatomy complete unless it takes some account of anomalies, and anomalies are not mentioned in this book, except some of those of the branches of the arch of the aorta and in the course of the obturator artery As a guide to dissection it might answer very well, but in its present shape and style its title is a misleading misnomer

WHAT TO DO IN CASES OF POISONING By WILLIAM MURRELL, M D, F R C P, Lecturer on Pharmacology and Therapeutics in the Westminster Hospital, etc First American from Fifth English edition Edited by Frank Woodbury, M D, Professor of Materia Medica, Therapeutics, and of Clinical Medicine in the Medico Chirurgical College of Philadelphia Sm 8vo, pp 158 Philadelphia The Medical Register Co, 1887

Dr Murrell is a very terse writer The preface to this little book shows that he wastes no words "A complaint has been made that the book is getting too big I admit it, but the fact is, there are too many poisons now a days If people who contemplate committing suicide would only adopt a uniform method it would facilitate matters greatly" Of

course a book on the treatment of poisoning by Dr Murrell is almost entirely based on a thorough knowledge of pharmacology; and he rightly says that one who forgets the antidotes to poisons cannot have a proper knowledge of this important branch of medicine

The book is conveniently arranged for ready reference, and besides the bald facts of treatment contains many useful suggestions With the exception of one particular it seems to be complete no mention is made of transfusion in gas poisoning, and this must be regarded as a serious defect

A TREATISE ON SIMPLE AND COMPOUND OPHTHALMIC LENSES, their Refraction and Dioptric Formulæ, including Tables of Crossed Cylinders and their Sphero Cylindrical Equivalents By CHAS F PRENTICE Publishers, James Prentice & Son, Opticians, 179 Broadway, New York

This is a neatly printed and abundantly illustrated little volume of 40 pages The contents of the volume are well indicated in the above title, and the style of the author is simple, and his methods of illustration easily understood

MISCELLANEOUS.

HEALTH IN MICHIGAN, JUNE, 1887 —For the month of June, 1887, compared with the preceding month, the reports indicate that diarrhœa cholera morbus, intermittent fever and cholera infantum increased, and that pneumonia, influenza, bronchitis, tonsilitis and measles decreased in prevalence Compared with the preceding month, the temperature in the month of June, 1887, was higher, the absolute humidity was more, the relative humidity was slightly more, the day and the night ozone were less Compared with the average for the month of June in the nine years 1879-1887, neuralgia increased, and intermittent fever, remittent fever, consumption of lungs, scarlet fever, diphtheria and bronchitis were less prevalent in June, 1887

For the month of June, 1887, compared with the average of corresponding months in the nine years 1879-1877, the temperature was slightly higher, the absolute and the relative humidity were slightly more, and the day and the night ozone were slightly less

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of June, 1887, at thirty nine places, scarlet fever at forty two places, typhoid fever at twelve places, measles at thirty six places, smallpox and typhus fever at one place Reports from all sources show diphtheria reported at nine places more, scarlet fever at ten places more, typhoid fever at eight places more, measles at fourteen places less, and smallpox and typhus fever each at one place more in the month of June, 1887, than in the preceding month

THE ALUMNI ASSOCIATION PRIZE OF THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK CITY —This prize of $500, open to the Alumni of the College, will be awarded to the best *medical essay* submitted to the Committee, upon any subject the author may select Essay must contain the results of original investigations or research made by the writer Each essay must be marked with a device or motto, and accompanied by a sealed envelope similarly marked, containing the name and address of the writer Essays for the prize to be awarded in May, 1888, must be sent to a member of the Committee, on or before April 1, 1888 ANDREW J MCCOSH, M D, WILLIAM G THOMPSON, M D and M ALLEN STARR, M D, are the Committee

DR HARVEY REED, of Mansfield, O, has been appointed Surgeon in Chief of Trans Ohio Division of the Baltimore & Ohio Railroad

THE HOT WEATHER IN CHICAGO —From the effects of the heat of last Friday, Saturday and Sunday 165 people died in this city For the week the deaths from insolation number more than one fourth of the total number of deaths

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM JULY 9 1887, TO JULY 15 1887

Lt Col A Heger, Surgeon, ordered to Ft Columbus, New York Harbor

Major J H Janeway, Surgeon, ordered to Benicia Bks as Post Surgeon, also as attending surgeon at Benicia Arsenal, Cal

Capt H P Birmingham, Asst Surgeon, ordered to Ft Myer, Va

First Lieut C E Woodruff, Asst Surgeon, ordered to Ft Mackinaw, Mich

Capt C K Winne, Asst Surgeon, ordered to Ft Wadsworth, New York Harbor

Capt Valery Havard, Asst Surgeon, ordered to Ft A Lincoln, D T

Capt L M Maus, Asst Surgeon, ordered to Ft Schuyler, New York Harbor

Capt J B Girard, Asst Surgeon, ordered to Ft Lowell, Ariz.

First Lieut J D Porndexter, Asst Surgeon, ordered to Camp Poplar River, M T

First Lieut C N B Macauley, Asst Surgeon, ordered to Ft. Gibson, Ind Ter

Capt C B Byrne, Asst Surgeon, ordered to Washington Bks, D C

Capt T E Wilcox, Asst Surgeon, ordered to Ft Niobrara, Neb

Major H Lippincott, Surgeon, ordered to Ft Union, N M

Major P J A Cleary, Surgeon, ordered to Ft D A Russell, Wyo

Major D G Caldwell, Surgeon, ordered to Ft Assiniboine, M T

Capt G H Torney, Asst Surgeon, ordered to Ft Robinson, Neb

Capt Walter Reed, Asst Surgeon, ordered to Mt Vernon Bks, Ala

Capt J H Patzki, Asst Surgeon, ordered to Ft Huachuca, A T

Capt R G Ebert, Asst Surgeon, ordered to Ft Custer, M T

First Lieut J E Pilcher, Asst Surgeon, ordered to Ft Monroe, Va

Capt J de B W Gardiner, Asst Surgeon, ordered to Ft Washakie, Wyo Ter

First Lieut A R Chapin, Asst Surgeon, ordered to Newport Bks, Ky

Major W H Forwood, Surgeon, ordered to Ft Snelling, Minn

Capt H O Perley, Asst Surgeon, ordered to Ft Wayne, Mich S O 156, A G O, July 8 1887

S O 159, par 2, A G O, July 12, 1887, assigns Capt W Matthews, Asst Surgeon, as member of Army Retiring Board at Washington, D C, and relieves Capt J O Skinner, Asst Surgeon

Capts L M Maus and H O Perley, Asst Surgeons, ordered to accompany the Eleventh Infantry in changing station from Dept Dakota to Dept East S O 158, A G O, July 11, 1887

Capt E F Gardner, Asst Surgeon, ordered to accompany the Twelfth Infantry from Madison Bks to Duluth, and to return with Eleventh Infantry S O 143, Div Atlantic, July 13, 1887

Capt R G Ebert, Asst Surgeon, will, in changing station from Ft Hamilton, New York Harbor, to Ft Custer, Montana, accompany the Twelfth Infantry from Dept East to Dept of Dakota S O 159, A G O, July 12, 1887

First Lieut F V Walker, Asst Surgeon, granted leave of absence for four months S O 160, A G O, July 13, 1887

First Lieut Julian M Cahill, Asst Surgeon, ordered for duty as medical officer at Dept Rifle Camp, near Bellevue, Neb, August 1 next S O 66, Dept Platte, July 8, 1887

A board of medical officers, to consist of Major J S Billings, Surgeon, Capt W Matthews, Asst Surgeon, Capt F C Ainsworth, Asst Surgeon, is constituted to meet in this city for the examination of a candidate for admission to the Medical Corps of the Army S O 157, A G O, July 9, 1887

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ADDRESSES

THE SYSTEMATIC TRAINING OF NURSERY-MAIDS

Abstract of the Third Annual Address to the Graduating Class of the Medical and Dental Departments of the National University, Washington, D C

BY SAMUEL S ADAMS, A M, M D,

PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE IN THE NATIONAL UNIVERSITY

The selection of a field in which you shall labor is not an easy task, so I may be pardoned for suggesting one It is a field in which neither your age nor your bachelorhood will be objectionable, and it is one in which the laity will be glad to assist you It is also one in which both branches of the class can take an active part for I believe all of you desire to benefit mankind

The field I propose for you is, so far as I am aware, a new one, but none the less wide and useful It is that of organizing a training school for nursery maids —that portion of our home guard which manages your patients during the periods of greatest sickness and mortality infancy and early childhood

That the management of children in general is wrong, unreasonable and unnatural is evident to any one who will consider the disproportion there is between the physical and mental capacities of the present generations, and diligently seek the causes We not infrequently meet in early life examples of unusual mental activity supported by a tottering physique, or in another case an early sacrifice of both mind and body By excluding transmitted vices of constitution, this impaired mental and physical condition is in my opinion largely due to bad nursing and bad habits contracted in early life As a method for the correction of the evils consequent upon the mismanagement of children I now ask you to consider the necessity for and desirability of the systematic training of nursery maids

In thus attempting to invade the sanctity of the nursery I trust that I may not be charged with trespass, as my sole object is to convince mothers of the importance of early training My ideas on this subject are not those of a doctrinaire but are the natural outgrowth of a decade's experience with children of different races and nationalities and of various stations in life from the highest to the lowest During this period the children that have passed under my care and observation have been in great part sick, but this has had but little weight in the formulation of my opinions I feel that an experience of eleven years, much of it with children in public and private practice, will certainly justify me in offering a few suggestions to young mothers as well as young doctors It may be said that it is unfair to judge of the early training of children from their manner, habits and conduct while sick I admit the force of this so far as the child is concerned, but when we witness the glaring defects of parental management which are so apparent in the sick room, we are justified in the conclusion that the like management in health cannot be what it should be For although the disposition of the child may be affected by disease the management of a sick child is a good exhibition of parental government

It is a sad commentary upon our boasted civilization that even educated women are not prepared for maternal cares, but are greatly dependent upon ignorant domestics for that knowledge of infantile responsibilities which should be learned in anticipation of maternity There is a kind of modesty pervading the female mind which seems to prohibit all reference to motherly cares by intelligent advisers This important duty has been too long left to uneducated women who are influenced by the examples and transmitted customs of their great grandmothers whose minds were warped by superstitious practices Indeed, so sacred are some of these superstitions that any attempt to convince an "old granny" that her methods are wrong will engender a prejudice against you that will have its effect beyond the nursery Nursing is gradually becoming more conformable to reason and common sense, though nurses still retain many traditional prejudices and, fancying that nature has endowed them with superior skill and wisdom, they often do much harm where they intended to do good If there is such a liability of young mothers being influenced by ignorant nurses to accept crude, barbarous and detrimental methods of nursery government, the importance of educating women for nursery maids would seem to be manifest It cannot be expected that a mother can properly superintend the mental and physical development of her offspring until she has studied the necessities of childhood, the characters of children, and the consequences of good or bad management It is in the nursery that many good and evil habits are formed If the evil are overlooked they may possibly be corrected later in life at the cost of much suffering and trouble, but it is much easier to prevent bad habits than cure them, hence it would seem more profitable to sow good seed in the garden and not leave

the soil barren, trusting to luck for good fruit It is no less true that the laborer in the nursery should be capable of distinguishing between traits of character which should be developed and those which should be eradicated

The education and early habits of nurses, and their training for the duty they are expected to perform, are sadly deficient It is necessary to have their services, therefore, they should be trained for the work In fact we complain of their bad qualities and ignorance, but seldom use any means to correct them I do not hope to eradicate this evil in the lower classes, but it can be modified by instructing the mind and appealing to the reason and the best feelings of human nature by means of example, precept, counsel and sympathy The gradual removal of these defects can best be accomplished by enlightening the understanding of those who are to have charge of the nursery

It is a rule in all professions that a person must have a general knowledge of the work before he can perform it, but this is not so in the management of the nursery We expect the watchmaker to understand the mechanism of a watch, the groom to be familiar with the peculiarities of the horse, the cook to be proficient in the mysteries of the kitchen, and the maid to know the latest style of dress making, hair dressing, and millinery, but we are willing to entrust the delicate mechanism of a child to one of whom rarely more is required than a good name, a little experience, an even temper, and a recommendation which is seldom investigated to see if it is genuine When mothers are convinced that something more than these few attributes are essential to a competent nursery-maid, we may hope to see the mental and physical health of our children improved

All children require moral and physical treatment, and whether they be rich or poor their physical being demands proper food, proper clothing, sleep, ventilation and exercise, while their moral training requires example, discretion, and cultivated senses and faoulties

In the higher walks of life a radical reformation in nursery government cannot be expected as long as the social duties of parents is such that the care of their children is consigned to a *supposed* competent maid hired to act as sponsor for their mental and physical growth upon no other justification than a neat appearance and a good recommendation from some unknown last employer

If I should ask a mother what she considered the duties of a good nurse to be, I venture to assert that she would reply to wash the child, dress it, feed it, put it to bed, take it up again, take it out for an airing, and not let it fall out of her arms Now if she should ask me to define her duties, I would say that she should be capable of giving proper attention to the bodily necessities of the child and like attention to the necessities of its mind

I do not pretend to have any novelties to offer, either in theory or practice, but only desire to define *what* the duties of a nursery maid are and *why* they are *her* duties, and *how* she can best be instructed as to their performance Her ignorance of the proper methods of nursing is a misfortune rather than a disgrace She should have the opportunity of being taught such methods by qualified instructors

The successful operation of the training school for sick-nurses has demonstrated the advantages of skilled nursing in the sick-room It has seemed to me of quite as great importance to establish a training school for nursery maids With the aid of the former we can undoubtedly manage disease better, with the aid of the latter we *may* fulfil the *higher* mission of preventing disease

In an examination of the vast amount of literature in the U S Army Medical Library, upon the nursing and management of children, I failed to find any reference to a training school for nursery-maids, so I may be the first to suggest such an institution Its value will seem more plausible when we consider the *natural* method of instructing children which has been so successful in our public schools The ease and rapidity with which children learn from *object teaching* will astonish the most sceptical

The school should embrace a corps of instructors whose duty should be to lecture upon various subjects appertaining to the nursing and management of children The requisites for admission should be a kindly, gentle disposition, a good moral character, a healthy constitution, a prescribed age, and a limited education They should be taught the dietary suitable for different ages, and *when* and *how* it should become more liberal, the various qualities of foods, and the best methods of preparing them, and generally their qualities in regard to digestion and assimilation

Another important subject to be taught in such a school would be the proper clothing for children, a field in which there is ample room for reform I hesitate to particularize lest in disentangling the limbs of the children I find myself the object of maternal indignation for thus rashly invading the peculiar province of feminine talent

A sleeping child is the picture of contentment The bright smiles flitting across its face indicate the pleasant dreams of health Sleep is its normal condition for most of its day and night, and if it does not sleep, it is because it has been overfed or is in a painful position, or has not had sufficient exercise, or is sick Your nursery-maids should be taught all this, and what the indications of the various causes of unsettled sleep are They should further be taught not to walk or rock the child to sleep, and instructed in the various methods of management, *especially in this regard*

They should be taught proper methods of open air exercise for children, the effect of atmosphere, of exercise, of sufficient and insufficient clothing, the dangers and consequences of exposure, and the necessity for constant and unremitting care and prudence when out for the daily airing

A few lectures upon the anatomy and physiology of childhood would prove beneficial in preventing the numerous injuries incident to rough handling, and in saving the child from the many troubles which are frequently the results of the violation of physiological laws

Another branch of instruction, and one of the most important, perhaps, should be in regard to the moral training of infants, for the influence of the nursery is great and very frequently continuous through life She should be instructed that the infant knows practically nothing until it has been taught, and that the best means of teaching is by sight, hearing, taste, smell and feeling As children learn largely by imitation, it follows that a good example, good manners and cleanly habits should be carefully taught as an important branch of the education of nursery maids, and among things she should be taught not to do, is the indulgence in deception, vulgar talk, ugly facial expressions, ungraceful attitudes, the use of "ghost stories" or thrilling narratives, and, in fact, the avoidance of all unseemly, indecorous and improper language and conduct in the nursery I have no doubt that many of my hearers have seen the consequences of some or all of these

Finally, to conclude this brief summary of what should be taught in the proposed school, I have left to the last what may be, perhaps, the most important —the necessity for studying the various peculiarities of disposition and character, and of moulding and modeling the child with reference to them

With this brief *resume* of the scheme of instruction to be pursued in the field proposed, I submit to you that if you will interest yourself in it, and by so doing succeed in correcting the numerous mistakes and errors now so common in the nursery, you will find that your earlier professional days will be pleasantly employed, and that you will not have labored in vain

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ABSTRACT OF A LECTURE ON CHOLERA AND ITS TREATMENT[1]

BY PROFESSOR DR H VON ZIEMSSEN,
DIRECTOR OF THE MEDICAL CLINIC IN MUNICH

[The lecturer spoke of the importance of the subject, of its classification, the views of different students, as Pettenkofer and Koch, in regard to the nature of the infectious material, the duration of the cholera poison, and the ways of invasion He accepts Koch's views The incubation period varies between 12 hours and 5 days The clinical picture varies according to the intensity of the infection Cholera diarrhœa represents the mildest degree of the infection, beginning with dyspeptic troubles, or comes on suddenly without these, usually at night With painful gripings come on a number of copious, thin, light-colored discharges, usually painless and with a feeling of relief, but often with an unpleasant sensation in the abdomen, general malaise, pain in the head, and slight fever[2] During an epidemic of cholera these cases are of unusual frequency, too often ignored by unthinking persons, and by others magnified into more than their real import When properly treated they run the course of simple infectious intestinal catarrh, and health is restored in one or two weeks But if the diarrhœa be unchecked new infectious material gets into the intestine, and the simple mild diarrhœa develops into cholerine, or the asphyctic form of cholera

Cholerine, the specific infectious vomito diarrhœa, usually comes on suddenly at night, after dyspeptic troubles, diarrhœa and the development of gas in the intestine Vomiting and diarrhœa succeed each other rapidly, the discharges are abundant, fluid, feculent at first, but soon colorless, and very much like water There is moderate fever, small pulse, great thirst, rapid decline of vital force, sinking of the renal secretion, excessive muscular weakness, cramps in the legs, and partial loss of voice These symptoms are exactly those of cholera nostras, in which there are some fatal cases which take on the symptomatology of cholera asphyctica In favorable cases the normal function of the stomach and intestines is restored in one to two weeks, though there is great weakness which lasts for several weeks

Cholera asphyctica, cholera algida, begins with prodromal diarrhœa, which often seems harmless to the patient because it is generally painless and accompanied by a feeling of relief After a day or so of this diarrhœa the so called cholera attack begins, usually at night, the discharges suddenly become very copious, frequent, whey-like, and follow in rapid succession, and then follow the usual symptoms of true cholera In very severe cases the disease takes on a typhoid form, the most important symptom of which is the disturbance of the renal secretion, which may induce uræmia There are also cases of simple febrile reaction, without important organic affection, but with all the phenomena of high fever, and finally taking on a typhoid form through secondary affection of organs, in these cases diphtheria of the mucous membrane of the large intestine, the vagina, the urinary and gall bladder, of the throat and larynx play the principal rôle Rarely are there inflammations of the lungs, serous membranes etc

In regard to quarantine, sanitary cordons, etc, the author is in accord with the best sanitarians land quarantine is impracticable and impossible Cholera patients should not be brought into contact with other sick persons The details of individual prophylaxis include first the cleansing of the houses, the floors, and the surroundings, a regular healthy mode of living, which conforms as nearly as possible to the accustomed methods, and the especial avoidance of all food which may induce digestive troubles Those with weak digestive organs should exercise double care Especially to be warned against are unripe fruits, cucumbers, fat meat and insufficiently fermented beer No food should be taken unless it is well cooked, except such foods as are usually eaten raw, which should be previously washed with a disinfecting solution, such as a 1 20,000 solution of corrosive sublimate or a 1 1000 solution of salicylic acid, and then washed off with freshly boiled water Milk should always be boiled a short time before it is used, and water should be boiled, acidulated with hydrochloric acid and then cooled Of wines preference should be given to the red in case they have

[1] Translated by permission of author and publishers, from advance sheets by Wm G Eggleston M D of Chicago

[2] According to Poznansky the coming attack of cholera is indicated by slackening of the pulse and the disease may be thus diagnosticated in healthy people and the gravity of the attack is in direct proportion to the slackening of the pulse [*Trans*]

been bottled before the beginning of the epidemic After eating and drinking from 8 to 10 gtt of hydrochloric acid should always be taken, on account of the very noxious effect of this acid upon the comma bacillus Strict personal cleanliness, frequent changes of linen, sufficient clothing, and movements in the fresh air are necessary Cholera infected houses and quarters are to be avoided, and especially a room situated directly above one containing a cholera patient [3]

We now come to the treatment of the cholera patient The present therapy of cholera is based on the consideration that we have to do with a specific mycotic process in the mucous membrane of the small intestine, and that the exuberant culture of the comma bacillus here is the cause of the colossal transudation into the intestinal canal, and further, that a product arises from this fungous culture which poisons the whole organism in the most severe manner If this be correct—and it can scarcely be longer doubted—we have first to direct our attention to the bacillus culture in the intestine, and in the second place we must antagonize its action, guard against the blood thickening which is the result of the transudation, and against the motor paralysis, the result of the action of the alkaloids of decomposition of the bacilli It must therefore be apparent that the treatment is the more efficient the sooner it is begun So long as we have to do only with the prodromal diarrhœa we may hope that the drugs which we give will affect the bacillary process in the intestinal wall But if vomiting has set in it is very probable that nothing will reach the intestine from the stomach, or at least we cannot depend on the drug acting

In my experience calomel has the first place of all drugs which have been recommended in the prodromal stage After having tested its action in the beginning of typhoid fever I would now begin treatment in cases of cholera with 2 or 3 doses of 5 gram (gr vijss), and then give small doses of grm 05 (gr ¾) every two hours Calomel is superior to all other antimycotic drugs in that its action is tolerably clear, and its harmlessness in inflammatory infectious conditions of the intestines is sufficiently shown in the initial stage of typhoid fever We know that a part of the calomel is changed into corrosive sublimate in the intestine, how much we do not know, but the quantity of sublimate formed is sufficient to have an antimycotic action, for since a 1 30,000 solution of corrosive sublimate is instantly fatal to fungi we can easily understand the action of the smallest quantity of sublimate in the intestine For the same reasons subnitrate of bismuth is used by others in doses of gr vijss—xv several times a day, and pure resublimed napthalin is recommended for trial by Rossbach in doses of gr jss—vijss 5 to 10 times in 24 hours in keratin pills

I cannot join in the general praise of opium, I have seen more unfavorable than favorable effects from it, and it seems to me that the cases treated with opium take on more severe symptoms and character than those treated without it The same was said by Dornbluth of the Rostock epidemic of 1859, in which at last opium was entirely given up Whether in larger doses it would act otherwise and better than in the usual small doses I cannot say

The ethereal oils, as represented in the so called cholera drops, are thought to act favorably This "cholera drops" is a mixture of opii croc 6, vini ipecac 4, tinct valerian aeth 12, and ol menth pip 1 S 15 to 25 drops every half hour in peppermint tea These so called Russian drops are used with peppermint tea, more especially in the light diarrhœa and early pains of cholera In time of cholera they should be kept in every house, as their presence will serve to allay fears of a night attack Peppermint tea and the ethereal oils have an atrocious taste and increase nausea Good Russian tea with some rum is more pleasant to most people Mulled wine also (half a pint of red wine cooked with cinnamon, cloves and sugar) is exceedingly pleasant, and is to be preferred to hot grog on account of the ethereal oils which it contains, and also on account of the amount of tannin in the warm aqueous alcoholic solution

As regards diet and everything connected with it the physician cannot be too strict In time of cholera every case of diarrhœa must be at once put to bed, a warm dry covering placed over the abdomen (hot bran sacks, or a pot lid with flannel covering), and the patient given a cup of hot tea If there is indigestion it is advisable to give a hydrochloric acid mixture (3 to 150 water and 25 syrup), and for food and drink only oat and barley water should be given And this exhausts the most essential part of the treatment of cholera diarrhœa Since it can be diagnosticated from a simple catarrhal diarrhœa only by finding the comma bacillus in the discharges, and as the necessary bacteriologal examination of the stools is impracticable in the majority of cases, the safest plan is to regard all cases of diarrhœa, which is profuse and resists other remedies for 24 hours, as infectious, and treat them with calomel, and keep the patients in bed until the stools become normal

In cholerine, the specific infectious vomiting and diarrhœa this same method of treatment is most important, but in view of the profuse discharges, the severe nature of the attack and the vomiting, the antibacillary treatment must be kept in mind, and with the other treatment recommended 3 doses of calomel of 0 5 should be given in the course of 3 hours, and the calomel continued in small doses Of course we cannot know how much of this reaches the intestine It is not advisable to give other drugs, such as opium, as it will only be vomited For the vomiting, and to allay thirst small pieces of ice may be swallowed, and morphia may be given subcutaneously in doses of 01— 02 For the very profuse and obstinate diarrhœa the warm tannin injections as used by Cantani are best

There is no difficulty in making the diagnosis of cholera algida The attack sets in with such stormy symptoms, and the subsequent conditions develop so rapidly in a few hours that the diagnosis is certain as soon as the physician enters the room When first

[3] For rules for disinfecting clothing, bedding etc see Report of Committee on Disinfectants of the American Public Health Association, a *résumé* of which are given in THE JOURNAL, Vol VI, p 11 [*Trans*]

called to a case of cholera give 0 5 of calomel every hour for three hours, and then 05 every two hours While it is possible that none of the calomel will reach the intestine, but all may be vomited, and that the bacillus culture in the intestine has already reached a high grade, the calomel is recommended

Enteroclysis and hypodermoclysis, as used by Cantani and his Italian colleagues, should be made use of immediately [4] The earlier this is done the better the chances for recovery, according to Cantani It is absolutely necessary that the physician have the ingredients for these procedures, tannin in doses of 20 grams for the first, and 4 grams of sodium with 3 of carbonate of soda already mixed and ready for use He should also have a case containing a glass syringe of 25 or 50 ccm capacity (I use the same as for blood injections), several cannulas, and a horn cannula (hard rubber?) with a long rubber tube for the infusion A funnel can be had in almost every house, as well as boiling water If these things have to be got ready when needed one or two hours may be lost, which is serious both for the patient and physician

Enteroclysis is made by Cantani's method with 1 or 2 litres of a 1 per cent solution of tannin, at a temperature of 39° or 40° C , several times a day Of the value of the tannin infusion, which is used not merely in the prodromal diarrhœa but in the asphyctic stage also, Cantani says The warm mass of water certainly acts mechanically and by its heat in a way to vivify and stimulate the intestine and the whole organism, but the principal point is the stimulation of absorption, in consequence of which thickening of the blood and anuria are prevented, or actively antagonized if already set in In many of Cantani's cases the renal secretions again became active a few hours after enteroclysis Cantani thinks, furthermore, that the tannin sterilizes the contents of the intestine by souring, and perhaps at the same time forms very insoluble tannin compounds with the alkaloids of degeneration, thus rendering them harmless, and also limits the transudation from the mucous membrane by its astringent action on the blood vessels Cantani goes on the assumption that the infusion passes the ileo cæcal valve and enters the small intestine, sometimes even going into the stomach, as is shown by the fact that the tannin solution is sometimes vomited, or may be removed from the stomach by the stomach pump Cantani adds that hydrochloric acid used in a 5 per cent solution sterilizes more powerfully than tannic acid, but is less astringent, and that corrosive sublimate, salicylic acid, boracic acid, thymol, and other substances perhaps act still better than tannin, but his results with the last were so good that he made no other experiments There are several hypothetical assumptions in regard to this method, especially the washing out of the small intestine,[5] but the reports of the Italian physicians are so favorable that the value of this simple procedure cannot be doubted

The purpose of Cantani's hypodermoclysis is to antagonize the effect of the rapid loss of water and alkalies from the blood and tissues in a simple and harmless manner by the subcutaneous infusion of an alkaline saline solution The method is as follows From 1 to 1½ litre of a solution of sodium chloride 4 grams, sodium carbonate 3 grams, to 1000 ccm of water (Drs Boretta and Minola, of Naples, also add 3 grams of sodium sulphate) at a temperature between 37° and 40° C , according to the temperature of the patient, are injected into the subcutaneous tissue of the body by means of a somewhat complicated apparatus, after previous disinfection of the trocar The mass of water is left by Cantani to spontaneous absorption, which takes place more quickly if a soap bath at 40° C has just been given The infusion must be repeated about every four hours, until the favorable effects, which may even appear after one injection, are manifested These effects are re-animation of the organism, warming of the extremities, improvement in pulse and respiration, and disappearance of anuria and cyanosis [6]

In Italy the results seem to be very favorable generally, though Cantani's statistics have no value For in order that cholera statistics be of value there must be exact diagnosis of the form of disease and the stage of the disease, as well as a statement of the period of the epidemic in which the cases occur The prognosis of individual cases depends very much on the stage of the epidemic, with equal intensity of the disease the prognosis in the last stages of the epidemic is very much better than at the beginning But the method seems to have an undoubtedly favorable influence on the disease But I would advise that the method be much simplified The complicated injection apparatus of Cantani is entirely unnecessary A glass syringe of 50 ccm capacity, such as I use for subcutaneous blood injections, with 2 or three cannulas, is entirely sufficient I would further advise that the salt solution be dissipated by massage, as in case of blood injections, for absorption will thus be hastened, and in a quarter of an hour 1 or 1½ litre injected in 2 or 3 places can be easily dissipated and absorbed The physician can

[4] By Enteroclysis is meant the injection of a large quantity of fluid into the intestines Cantani used tannin solution Hypodermoclysis is the injection of a large amount of fluid into the subcutaneous cellular tissue For hypodermoclysis Cantani usually employed a solution composed of water 1 litre sodium chloride 4 grams sodium carbonate 3 grams This is heated to 39° or 40° C and injected Cantani says that the sides of the abdomen are the preferable sites for the injections The quantity of liquid to be injected should not exceed 1500 ccm as a rule when the patient is in the algid asphyctic state When the patient is not very dry smaller injections are better—from 800 to 1000 ccm at a time In the typhoid stage the injections should be of 500-600 ccm each In most cases it is necessary to repeat the subcutaneous injections until the pulse reappears or increases in strength the respiration improves cyanosis lessens and urine is secreted The hypodermatic injections should be still more frequently repeated in the typhoid state The more advanced the symptoms of algidity and paralysis the higher should be the temperature of the fluid injected (39° or 40° C) Cantani says that the practical results of enteroclysis in cholera were even more splendid than those of hypodermoclysis

Vincenzo Vitone used successfully the following solution for enteroclysis warm water 100 grams tannic acid 3 grams gum arabic 20 grams laudanum gtt 12 in a child of 8 years E Vilcani has used as much as 15 grams of tannic acid to 2 litres of water

Cantani's solution varied from a 1 per cent solution of tannic acid to 2 grams 600 ccm

For abstract of Cantani s article see Lancet Sept. 26 and Oct 3 1885 [*Trans*]

[5] There is no doubt that fluids can be thrown *per rectum* beyond the ileo cæcal valve [*Trans*]

[6] M Hageur during the recent epidemic in France treated cholera by venous injections of saline solution To a litre of distilled water was added 10 grams of sodium chloride and 8 grams sodium sulphate heated to 38° C The injection was effected in from 12—15 minutes In the case of all feeble subjects this treatment produced only incomplete reaction when the algid condition had been pronounced Among healthy sober adults and children the results were remarkable the injections seemed to rescue them from certain death [*Trans*]

easily carry the syringe recommended, as well as powdered tannin, salt and carbonate of soda, which are to be dissolved in thoroughly boiled water The needle should also be thoroughly boiled before each injection

I may also mention here the procedure of Keppler, which he has used with good results in Venice For the subcutaneous injections he uses a solution of 7 grams of salt, 1000 ccm of distilled water, and 10 grams of absolute alcohol This solution is warmed to blood-temperature, and injected into the neck or infra clavicular region, 50 ccm being injected every minute until the pulse returns, then every 5 minutes, and later every half hour In all, from 8 to 12 litres are used Keppler emphasizes the great value of the alcohol for sustaining the heart, and especially commends the value of the method when used early The advisability of adding alcohol to the solution is apparent, and should not be neglected

The subcutaneous method is certainly the most promising, and capable of many modifications, especially as regards the use of antimycotic and other drugs On account of the danger in which the patient is, and the anxiety of his friends, other measures than those mentioned must be resorted to Of these stimulants are of the first importance [7]

In beginning paralysis and cyanosis camphor, in the form of ol camphorat fortius (1 5 instead of the officinal 1 9) should be given, preferably hypodermatically, and when from 3 to 5 syringefuls are injected one after another at the right time the action of it on the heart is very favorable In many cases everything depends on energetic stimulation, and for this camphor is much superior to ether, in that there are no local after effects from its use, such as suppuration and gangrene Stimulants which act through the stomach, such as the preparations of alcohol, have no especial value, for the stomach will absorb nothing, and at most the mucous membrane of the fauces and œsophagus will take up but little Champagne is to be recommended, placed on ice, with broken ice in it, and taken in small quantities, this is very grateful to the patient

In the muscular cramps of the legs and other parts it has always seemed to me that rubbing the bellies of the muscles with large pieces of ice was the best remedy Spiritus saponis is also used for rubbing, but when much used acts unpleasantly on the olfactories of the patient and attendants

Continuance and repetition of diarrhœa with colic and tenesmus are best treated locally with warm infusions of tannin with the addition of some opium, or, if large infusions are no longer borne, by means of small clysters of warm thin starch and opium injections (starch decoction 30 grams, with gtt 20 tinct Thebaic), repeated several times a day In the later stages of the disease, when the condition of infection and intoxication is broken and the resulting local disturbances become more prominent opium is very useful

Cholera typhoid is treated symptomatically according to the more prominent disturbances The uræmic form, as in cases of acute scarlatinal nephritis, is treated with warm, and in lowered temperature with hot, baths, followed by warm woolen coverings, and internally with milk in large quantities mixed with carbonated waters Drugs are practically useless, and so called diuretics do more harm than good

The diphtheritic as well as the inflammatory (pneumonic, etc) forms of cholera typhoid are treated according to the established rules for these diseases, though it must be remembered that here we have to do with an organism which has been severely poisoned, and whose organs are more or less crippled The cautious use of food and stimulants will therefore play a leading part in treating the local affection

The diet of the convalescent cholera patient demands especial care The severe and partly necrotic lesions of the intestinal mucous membrane, the extensive epithelial loss, the tendency of the vessels to new hyperæmia, the faulty state of the assimilative functions, all demand the greatest precaution, and we cannot too strongly oppose the impatience of the patient and his friends to quickly return to solid food and to leave the bed Restoration takes place more rapidly and more completely in bed and on a fluid and semi fluid diet You will not go wrong if you regulate the diet for three or four weeks as you would after a severe attack of typhoid fever I would recommend the following diet Night and morning, tea with English biscuit, Noon, meat broth and meat juice, a soft-boiled egg, with a little Port or Marsala, some minced lean ham, or pigeon or chicken, or partridge in the broth, light red wine, such as Bordeaux, Voeslau or Ofen, slightly warmed, Afternoon, tea with cakes Supper, mucilaginous soup with meat juice, meat extract and wheat-bread, and half a pint of well fermented beer After this we may allow boiled rice or grits with blackberry juice Thickened blackberry juice (strained) is very advisable on account of the quantity of tannin which it contains, made into a compote it is very digestible Bilberries (blueberry, whortleberry) may be allowed after having been soaked in fresh water for 24 hours, when they swell up as though just boiled The only drugs to be used at this stage are bitters, both pure bitters for the improvement of the appetite and of the gastric functions, and the combined for their influence on intestinal digestion and on peristalsis, of these radix rhei is best Irregularity of the bowels is so very frequent in the course of convalescence from cholera that the patient cannot do without rhubarb In small doses, in which the bitter principle acts more than the cathartic acid, it obviates the fatal tendency to diarrhœa and flatulence, while in larger doses it acts well in case of existing constipation In the first case I would recommend the aqueous tincture of rhubarb with elixir aurant comp in equal quantities, giving a teaspoonful two or three times a day If stronger action be needed the tinct rhei vinosa either pure or with elix aurant comp and tinct chinæ comp may be given in teaspoonful doses

After convalescence is established I would recommend salt baths in a mild mountain climate, and in winter a climatic resort (sanitarium)

[7] Poznansky recommends small doses of hydrocyanic acid given at intervals, which quicken respiration, make the circulation more active, and raise the temperature [*Trans*]

ORIGINAL ARTICLES.

INTUBATION OF THE LARYNX, WITH INFERENCES FROM ONE HUNDRED AND THIRTY-FOUR OPERATIONS

Read in the Section on Diseases of Children, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887,

BY J E WAXHAM, M D,

PROFESSOR OF DISEASES OF CHILDREN COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO PROFESSOR OF LARYNGOLOGY AND RHINOLOGY, CHICAGO OPHTHALMIC COLLLGE

In presenting this paper, it is not with the object of instructing this assembly or of imparting anything new or startling, but simply to present the result of my experience with this new operation, with which you are all familiar, and to excite a discussion which will be more valuable than any contribution

On April 19, 1885, I performed intubation, for the first time, according to the method of Dr O'Dwyer In August, 1886, I reported 83 cases with 23 recoveries, or a percentage of 27 71 Since the latter report it has been my privilege to perform the operation in 53 cases, with 14 recoveries, making a total of 136 cases with 37 recoveries, or 27 20 per cent

The ages of these patients were as follows

5 cases with	1 recovery	or 20 per cent	under one year	
15	3 recoveries	or 20	between 1 and 2 years	
29 "	7 "	24 "	2 "	
23 "	4 "	21 "	3 "	
21 "	7 "	33 "	4 "	
15 "	7 "	46 "	5 "	
3 "	1 "	33 "	6 "	
9 "	2 "	22 "	7 "	
4 "	2 "	50 "	8 "	
2 "	2 "	100 "	9 "	
2 "	0 "	00 "	11 "	
1 "	0 "	00 "	14 "	
7 "	0 "	00 "		
136	37	27 20	Average 3 yrs 8 mos	

There were 72 cases three years old or under, with 16 recoveries, or 22 per cent, while there were 64 cases over three years, with 21 recoveries, or 32 8 per cent

The youngest patient to recover was an infant of nine months, the oldest a child of nine years In every case without exception false membrane was observed The longest period that the tube was worn was two weeks, the child being but two years old and making a perfect recovery The shortest period that the tube was worn was one hour The patient was a boy three years old, and was under the care of Dr J G Berry The patient was in a semi comatose condition and was almost pulseless All who saw the child were firm in the belief that he could live but a very short time The tube was introduced and the child was soon resuscitated, considerable membrane being rejected In an hour we were again called in great haste, as the child had coughed up the tube, together with a small piece of membrane As the respiration was perfectly easy the tube was not reintroduced The membrane did not re form, and the child made a rapid recovery

Taking the above cases as a standard, the results would seem satisfactory

In the whole history of tracheotomy where can we find a record of 72 cases of three years or under, with recoveries amounting to 22 per cent ? Indeed, tracheotomy is so rarely successful at this age that many consider it a contraindication to the operation After the age of three years we have a record of 64 cases with 21 recoveries, or 32 per cent A record certainly comparing favorably with tracheotomy

Many, in criticising intubation, speak slightingly of the operation and insinuate that the operation is *always performed early* and often unnecessarily. Such is not the case In my own experience the operation has often been delayed and accepted only as a last resource It has not been performed until there has been absolutely no hope without surgical interference

Many, with limited experience, report a much higher percentage of recoveries than has been given above Some report as high as 30, 40, and even 50 per cent of recoveries In my own experience 17 successive operations were followed by 8 recoveries, or 47 per cent In another series of cases 13 successive operations were followed by 6 recoveries, or 46 per cent Taking a large number of cases, however, of all ages, conditions, and grades of severity, and we can hardly hope to save more than about 25 per cent This, however, is a larger proportion than can be saved by the majority of physicians with tracheotomy

DISCUSSION

DR A B STRONG, of Chicago, said We have listened to a very favorable report on intubation of the larynx for diphtheritic croup The report is, I am firmly convinced, much more flattering than the facts would warrant, had each and every case so far intubed been appealed to It is but natural that we should first hear everything favorable to this operation, and but little against it Surgeons are not accustomed to report their failures or mistakes, yet failures, and many of them to one success, are legion It is time that the other side should be heard from For one year prior to last February I gave the subject of intubation for diphtheritic croup much study and most careful practical attention During that time I intubed 32 cases, and 31 of them are dead With these personal facts before me, I certainly am no longer justified in recommending the operation Since then I have refused to intube a large number of cases I deem it my imperative duty to the profession, and in the interest of humanity, to give you the benefit of my experience The operation, when skilfully done, is easily and quickly performed, without blood, anæsthesia, or fright of parents With one or two exceptions I have had no trouble whatever to introduce the tube in a few seconds The first result, relief of the dyspnœa, is all that could be desired, for a few hours everything as a rule has gone on nicely But look at the ultimate results! Thirty one dead, either from the extension of the membrane downwards, traumatic bronchitis, or pneumonia, or both combined, or from actual starvation. The trouble was the children could not eat or drink without in each case and every attempt some of the contents of the mouth passing through the tube into the air passages, and so exciting them to resentment

or inflammation To inject a little food into the rectum of a child is easy enough, but as a means of nutrition it is practically a failure To put a rubber catheter through the mouth or nose into the stomach, can be done, though not easily or without great resistance from the frightened child To nourish the little one in this way, many times in the twenty-four hours, is, to say the least, of doubtful utility In bed side practice it is thoroughly impracticable

Again, in introducing the tube there is danger of making a false passage I know of three or four such cases, one of them in my own practice The point of the tube was seen and felt under the skin just above the hyoide bone On introducing the tube no force whatever should be used, unless you are absolutely certain that the point of the tube is in the glottis, and then only a minimum amount To avoid such danger knowledge, skill, and gentle manipulation are as essential here, or rather more so, than to introduce a sound into a narrow and tortuous urethral track without doing violence to the parts Don't make a false passage Don't use force

Again, when the membrane has existed in the larynx for three or four days, when it generally begins to loosen, there is great danger of crowding it down, with imminent risk of suffocating the patient This has happened to me four or five times Though there was no death from this cause alone, I came very near killing one little patient In short, my experience, personal and otherwise, on introducing the tube compels me to say it is not the simplest operation in all surgery To remove the tube is more difficult than to introduce it In about one fourth of my cases I have had more or less trouble to get the tube out That is, I failed on the first or second trial To get into the small hole at the upper end of the tube with the point of the extractor, while the larynx moves up and down and the child struggles, is easy to talk about, but to do it without puncturing the soft parts adjacent to the collar, or grasping them in the bite of the instrument, is entirely another matter In one of my cases the tube appropriate for the age slipped through the larynx It was not pushed through I had great difficulty in extracting it through the glottis It is scarcely necessary to say the child died a few hours afterwards from a then existing pneumonia and shock consequent upon the operation In only one of my cases was the tube coughed up I always found the tube perfectly clear, no incrustations This was so whether the tube had been in position a few hours or several days

I have heard enthusiastic supporters of intubation say that the after-treatment of a case wearing the laryngeal tube, was easy in comparison with a similar case wearing the tracheotomy tube This certainly has not been my experience I believe it to be a most erroneous claim Facts that I have observed will not sustain it The child is tormented with thirst, only when this great craving becomes intolerable will the little one eagerly attempt to swallow fluids He makes a bold attempt, gulps or sips down a little, but pays most dearly for his experiment in the distressing cough the act has excited You can't coax him to try that again until his burning thirst is so intolerable that he must have fluids Ice in the mouth serves him the same way He takes nothing willingly This is no fancy picture It is simply a statement of facts as observed in each one of my thirty two cases Some have not so much difficulty as others, but all have more or less, enough to do them a positive injury It makes no difference when the child is taking fluids, whether it is lying down or sitting up, head bent to one side or the other, chin depressed on the chest or occiput thrown back In any and all positions of the head, he can't drink without a dangerous amount of the fluid passing into the air passages

Since quitting intubation I have made tracheotomy in some cases, two of these recovered, making for me a total of five recoveries in eighteen tracheotomies Never before my experience with intubation did I fully realize what a great blessing it is for a child, after tracheotomy, to be able to drink as fully and as often as it desired without endangering its life by coughing or having its lungs irritated by the fluid I believe my personal experience warrants the assertion that tracheotomy will save every case that intubation will, and do it with much more comfort to the little patient and far less anxiety to the surgeon and parents

In conclusion, I would say there is one condition in which I have found intubation of decided practical value That is as aid to the after-treatment of tracheotomy You are aware that tracheotomy tubes sometimes have to be worn weeks and months after the patient has recovered from the laryngeal stenosis The text-books of current literature are full of such cases The explanation has been that granulations grow in the upper angle of the tracheal wound and so obstruct its lumen when the tube is removed that air cannot pass through the larynx

Surgeons have cut and burned off these growths once, twice, or it may be a dozen times, and still often they dare not leave out the tube for fear of suffocating the patient The trouble I have found is not so much in the granulations as in the obstruction caused by the infolding of the cut edge of a ring or two of the trachea, at the upper angle of the incision into it When the tracheal tube has been worn for days this infolding is well marked, together with depressed condition of a whole ring or two of the trachea just above this highest incised one This condition was most beautifully shown in one of my cases I tried many times for three weeks, by snipping and burning, to get rid of the tube Not till I placed the child in a good light and made careful examination of the part did I discover what was the matter I found abundance of granulations, but they were resting on the incurvated parts, as I have mentioned I introduced the laryngeal tube through the mouth and had the great satisfaction of seeing the infolding parts brought up to their natural position, and so the obstruction was removed I immediately removed the laryngeal tube and did not replace the tracheal one, and the wound healed quickly without any further trouble

The same experience I had with another case I

shall keep my intubation set for just such cases I shall not intube the larynx again till some modification of the O'Dwyer tube enables the child to swallow nourishment Some one else, however, will have to do the experimentation first No more of it for me

Dr M P Hatfield, of Chicago, said

My experience with intubation, although much less, closely resembles that of Dr Strong The cases were ten in number, the insertion of the tubes in the first two being performed by Dr Waxham, and the results were ten deaths In four of the cases death apparently resulted from exhaustion, or diphtheritic poisoning, in the remainder from "Schluck pneumonia," or that produced by food entering the trachea Consequently, I believe with Dr Tascher that the most valid objection against intubation is the dropping of food into the bronchial tubes and the resulting broncho pneumonia. This ordinarily appears in the course of forty eight hours, and is, and will continue to be, I fear, the most frequent cause of death after intubation The insertion of the tube, even in the hands of experts, is not as easy as they would seem to imply, but this difficulty can be overcome more easily than the danger just alluded to The tube often gives great, if not permanent, relief, but the more promising cases are the very ones in which the subsequent pneumonia appears At least, such is my experience It will be, I fear, that of the general practitioner who hopes to realize Dr Waxham's gratifying percentage of recoveries

Furthermore, it ought to be remembered that, while great credit is due to Dr O'Dwyer for his patient and conscientious experimentation with intubation, it is not a new device It was fully and fairly tried more than thirty years ago in France, and abandoned because the results were less favorable than those from tracheotomy In fact, Bouchut, who proposed the instrument, finally abandoned it entirely because, in his own words "The application of the cannula produces the results which might have been expected from an instrument of that nature It delays asphyxia and avoids a grave operation, tracheotomy, which the progress of events might have rendered useless " Does intubation do more to day?

Dr Mary Thompson, of Chicago I would like to ask Dr Waxham whether he introduces the tube in the original way—anteriorly or posteriorly?

Dr C W Earle, of Chicago I wish to compliment Dr Waxham for the introduction or revival of this operation in our city, and the skill with which he performs it I think we, as a profession, and those more particularly engaged in the practice of diseases of children, are under great obligations to him for pushing this matter forward The tabulated statement of cases which the doctor has presented to us this afternoon is very favorable indeed, although I think he is mistaken in believing that tracheotomy, in the hands of skilful operators, has not presented as good results I am in favor of the operation when I can get Dr Waxham to perform it for me The trouble is that everybody thinks he can do it It is like abdominal surgery—everybody believes he should be permitted to dabble in it, and many who have had no special study, practice or fitness, rush in to tube the larynx A large number of people will permit the operation of intubation who would not permit tracheotomy, and in my judgment many lives will be saved for this one reason There are a certain number of throats to be opened, for we shall always have cases of laryngeal stenosis, and tracheotomy or tubage must be done What we should insist upon is that only those specially fitted should be allowed to do this operation

Dr Waxham has undoubtedly saved more cases by intubation than any surgeon in the city has by tracheotomy, but if we knew all the unsuccessful cases which have taken place, the percentage would be small enough, and might not compare favorably with tracheotomy

Some operators in this city have tubed the larynx many times and have lost every case, and they are now crying a halt for the operation It is time for them to stop, or do as I do, send for Dr Waxham I have tried to do the operation with the doctor by my side it was impossible for me to enter the larynx, but as soon as I relinquished the instruments to my colleague the child was relieved at once I made this open confession before the Chicago Medical Society some weeks ago, and a quiet smile passed around the hall If others had made this same confession and stopped operating (and among them some who perhaps smiled), it would have been better for the babies I regard the operation as a justifiable one, and one which will save many, but I shall insist, as far as I am personally concerned, that none except those who are expert, those who have had a great deal of experience, and who thoroughly understand the technique of the operation, shall perform it I desire to raise my voice against every person getting a set of these instruments which the doctor has exhibited, and every time he sees a child suffering with slight stenosis of the larynx, attempting to do this operation I know a great many children are killed through lack of skill on the part of the operators The only criticism that I desire to make, and I have made it before, is that Dr Waxham represents that the operation can be done *with perfect ease by anybody* I think that in this he is in error *He* performs it easily, but everybody cannot

Dr J A Larrabee, of Somerville, Ky I regret coming in too late to hear the whole of the paper The statistical showing is exceedingly rare, and Dr Earle has more than covered the ground when he says that the great success is due to the skill of the operator. I have never performed intubation I think there is but one physician in the city of Louisville who has performed it, and in every case the patients died In three instances the tube was buried with the patient

We have had this past winter an epidemic of diphtheria in our city, and in the moribund cases in which I was called upon to do the operation of tracheotomy, under the most unfavorable circumstances, as a *dernier ressort*, I operated fifteen times, with three recoveries, the three patients that recovered were all under 3 years of age, and the others 4

Dr Waxham, in closing the discussion, said I am very glad to have heard from Dr Strong and from Dr Hatfield, for it is only fair and right that we

should hear from both sides of every question Because some have met with unvarying failure with tracheotomy, shall we denounce the operation? Because two or three have been unfortunate in their experience with intubation, shall we all vote the operation a failure? What do these gentlemen say when the statement is made that one operator has performed tracheotomy 100 times with but 1 success, and another 50 times with but 2 recoveries, another 20 times without a single recovery, and another 16 times with but 1 success, and still another 14 times without a recovery, making 200 cases by five operators with but 4 recoveries, or only one out of every 50? The failure of these gentlemen with intubation has more than its parallel in the history of tracheotomy, and I cannot understand why they should denounce one operation, and still uphold the other Indeed, I cannot understand the reason of their failure, unless it be from the use of too large a tube, or from lack of careful attention in the management of their cases I am not alone in my success Dr O'Dwyer reports to me 25 per cent of recoveries, while Dr Ingals, at the meeting of the American Laryngological Association, reported 514 cases collected from various sources with 134 recoveries, or 26 per cent, a percentage almost identical with my own

If you have intended purchasing these instruments, by all means do so, learn to use them *skilfully* and *well*, and I assure you that you will never regret it Do not be discouraged by the report of a few unsuccessful cases I feel that if any operation was ever a Godsend to suffering humanity, this one certainly is

In answer to Dr Thompson's question, I would say that I still introduce the tube with the beveled surface forwards, and the projecting shoulder backwards The epiglottis can more perfectly close the larynx with the tube in this position, and there is much less danger of ulceration

In answer to another question I would say that, while the artificial epiglottis does not work quite as perfectly in the larynx as it does under my finger, yet it is of great assistance in swallowing

There are many advantages that intubation possesses over tracheotomy, the chief one being our ability to gain the consent of the parents We shall have a great many patients where tracheotomy would not be allowed One of the most touching incidents of my life occurred not long since I was called to perform the operation upon an interesting child of 4 years The people would never consent to tracheotomy, and the mother left the room weeping and in the deepest distress at the thought of having even this operation performed upon her child The nurse took the suffocating child upon her lap, and in about five seconds the tube was in position and the child perfectly relieved The mother was recalled, and approaching the child, crying and wringing her hands in the greatest grief, the little one looked up to her with a smile, and said, "Mamma, I never said boo!" This certainly is a great contrast to the scene at a tracheotomy But we must have other than æsthetic reasons for preferring intubation to tracheotomy The crucial test is this Can we save as many or more lives by this method than by tracheotomy? The statistics bear me out in the statement that we can

I have now under my care a little patient 9 years old who has been wearing a tube for two days[1] The case was one of pharyngeal diphtheria, with extension of membrane in the larynx There are two other cases of diphtheria in the family The operation was performed to prevent impending suffocation, which had been increasing for two days I would suggest that a committee of two be appointed to visit and examine this patient and report their conclusions through THE JOURNAL of the Association

REPORT OF THE COMMITTEE ON INTUBATION

TO THE CHAIRMAN AND MEMBERS OF THE SECTION ON DISEASES OF CHILDREN, AMERICAN MEDICAL ASSOCIATION, 1887

Gentlemen —In accord with the provisions of the motion passed by your Section on the afternoon of June 9, 1887—a motion which directed the selection of two members of the Section to visit with Prof F E Waxham a patient upon whom he had performed the operation of intubation three days before, we the undersigned, your committee, visited the patient about 8 30 P M June 9 We found a girl, Minnie Smalley, aged 9 years, a light brunette, in the ninth day of an attack of diphtheria. Both parents, nurse and attending physicians, reported the child on the sixth day of her illness as apparently dying from dyspnœa She was cyanotic, with thready pulse, and there were little hopes of her recovery when Dr Waxham was called, and in a few moments succeeded in introducing a tube into the larynx with complete relief to all the threatening symptoms A spray of diluted alcohol was ordered, or rather was permitted, and semi solid foods directed Dr Waxham had not seen the patient again until the hour he called with your committee We found the respiration perfectly easy, 28 to the minute, not noisy, an easy cough with muco pus expectoration, voice a little hoarse and bronchial, lips red, skin dry, circulation good, pulse 125, soft, compressible, volume medium, temperature 101¼°, tongue coated with a white fur membrane still visible over arches and columnæ, but very thin and soft, adjacent parts red and inflamed While we were present the child ate tapioca pudding freely without any cough or spasm whatever She had not known there was anything in her throat until the day previous when her mother incidentally mentioned the fact The improvement had been steady from the moment the tube had been introduced

There were two other children sick with the disease in an adjoining room, but both cases mild Dr Waxham suggested a little more nourishing grade of food, and announced that he would remove the tube the following day, as it was a rule with him not to leave it longer than the fourth day, even if he was required to reintroduce within a few hours, giving as a reason the liability to the development of ulcerative action, and the danger in such case of the sloughing of the unhealthy tissues with the added complications resulting from such possibilities

[1] June 16—Patient fully recovered

It was the privilege of one member of your committee to be present next day, June 10th about 11 30 A M, and witness the removal of the tube, which was done in the exact manner advised by Dr Waxham in his monogram upon intubation The removal was accomplished with an ease, a dexterity and a skill which was a revelation to those present, a revelation which exhibited the hand and the mind of the master in his chosen art

Still clinging to the removed tube were pieces of false membrane from an eighth to a fourth of an inch in diameter, and as thick and firm as good strong blotting paper The child said she felt no pain, nor special annoyance during the removal of the tube, and a few moments afterward ate freely of some semi solid food Her condition was about the same as on the previous evening with perhaps a slight increase of debility and a tendency to heart failure, but still with many favorable symptoms giving strong hopes of recovery

On the 14th inst, *i e*, on the fourteeth day also of the disease, we received from Dr Waxham the following note dated the 12th inst "It gives me great pleasure to report that our little patient is now out of danger The doctor informs me that the pulse to day is 80, temperature down, strength improving, and that he considers that there is no further danger "

This adds one more success to the operation, and we assure you it adds two earnest converts to the importance and high value of the operation as a means of tiding over the most dangerous period in a certain proportion of cases of laryngeal obstruction in pseudo membraneous disorders Of course it requires thorough anatomical knowledge, manual dexterity, sound judgment, and well planned collateral management, but so does every other great success in hours of extreme danger

We believe that every gentleman who provides himself with the necessary instruments should also further prepare himself by repeated operations upon the cadaver until he has acquired the necessary skill to do the operation with rapidity and ease, thus adding largely to the possibilities of its success The celerity with which the operation may be performed, its freedom from local injury to the diseased tissues and its promptness in relieving a threatening fatal symptom, all commend its favorable consideration, and generally its preferable selection as compared with the older and possibly (?) more brilliant operation of tracheotomy

We believe that Dr Waxham deserves the thanks of the profession for his untiring and persistent efforts in giving this operation, with which his name will be always associated, the consideration it deserves, and in placing it in the high position to which it belongs in the list of remedial measures in desperate emergencies

(Signed,) GEO WHEELER JONES, M D
JOHN A LARRABEE, M D
Committee

Danville, Ill, June 22, 1887

SUPPURATIVE INFLAMMATION OF THE ANTRUM

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty Eighth Annual Meeting of the American Medical Association,

BY E FLETCHER INGALS, A M, M D,

PROFESSOR OF LARYNGOLOGY RUSH MEDICAL COLLEGE PROFESSOR OF DISEASES OF THE THROAT AND CHEST, WOMAN'S MEDICAL COLLEGE CHICAGO

The mucous membrane lining the antrum of Highmore is liable to suppurative inflammation and a collection of pus which may partially or completely fill the cavity, if its opening into the middle meatus of the nasal cavity remains patent, but when the latter becomes closed by inflammation and swelling of the Schneiderian membrane, the pressure caused by the continued formation of pus may cause great expansion of the bony walls, and corresponding increase in the size of the cavity This condition has been termed abscess of the antrum, but as, excepting the presence of pus, it is usually devoid of all the characteristics of an abscess of the soft tissues the term suppurative inflammation is more appropriate

From the location of the antrum, immediately above the bicuspid and molar teeth, the fangs of which often perforate its floor, and from its more or less free communication with the nasal cavity, it would be expected that disease of its lining membrane would be frequent, resulting either from affections of the teeth, or extending from the nasal mucous membrane, which is so often inflamed As a matter of fact, however, this disease cannot be considered common, for many physicians practice a lifetime without meeting examples of the kind However, it is doubtless more frequent than generally supposed, for it not infrequently happens that the affection is simply called catarrh, and its real nature is overlooked for want of a careful examination Inflammations in this locality are occasionally caused by external injury, and they are sometimes due to extension of the same process from the nasal cavity, but by far the most frequent cause is disease of the teeth The normal opening from this cavity into the middle meatus varies from the size of a crow quill to an opening nearly large enough to admit the tip of the little finger, in the latter condition the products of inflammation may be readily discharged, and a spontaneous cure may result without suppuration, but when the orifice is small it may readily become closed and then the pent up secretions become purulent and offensive In the earlier part of the affection the patient is liable to experience a sense of weight in the part, or to suffer from more or less tenderness and pain in the teeth, cheek, orbit or frontal sinuses, but in some instances none of these symptoms are present, and in chronic cases they are often absent, doubtless on account of the secretions having found free exit into the nasal cavity, as the swelling of the acute inflammation subsided

The formation of pus is usually indicated by an increase of the pain, which becomes of a throbbing character, and these symptoms are often attended by rigors alternating with flashes of heat Together with these symptoms an unusual discharge is usually

present from the naris of the corresponding side, which may be either blown from the nostril or drawn back into the throat This discharge is most abundant early in the morning, or at any time after the patient has been long in a recumbent posture, but it usually occurs also at irregular intervals during the day

In chronic cases the discharge is purulent and generally exceedingly offensive—much of the annoyance which the patient experiences being due to the offensive odor and taste of the pus which trickles in to the throat during sleep

Persistent discharge, from one nostril only, is usually due either to a foreign body, or to the disease under consideration, but nasal polypi, suppurative inflammation of the ethmoidal or frontal sinuses and polypi, or malignant growths of the antrum, may cause similar symptoms

Where pain in the region of the antrum and an offensive purulent discharge from the naris of the corresponding side are present, there can be little doubt about the diagnosis, but in all cases careful inspection of the mouth and a critical rhinoscopic examination must be made Upon examining the naris a collection of pus will often be seen in the middle meatus, and a streak of pus may be seen running down across the middle portion of the middle turbinated body If this is wiped away it is apt to return in a few minutes But in cases in which secretion takes place slowly, the patient may need to keep the head erect for many hours, and then lie down with the diseased side uppermost before the discharge will return

In many cases the inferior turbinated body is much swollen, so that it is at first difficult to thoroughly inspect the parts, but by the application of a small amount of cocaine the turgescence will be reduced, and then with the aid of a rhinoscopic speculum, reflector, and good light, foreign bodies or polypi may be readily detected or excluded from the problem of diagnosis This done, there remains but one affection with which disease of the antrum is liable to be confounded, viz suppurative inflammation of the ethmoidal cells Between these affections the diagnosis is sometimes exceedingly difficult, but in disease of the ethmoidal cells there is usually much less pain than in disease of the antrum, the discharge from the nose is less abundant, and on inspection the pus is found to trickle down at the posterior end of the inferior turbinated body instead of across its middle It will be remembered, however, *that in some cases of disease of the antrum* there is little or no pain, and that in others there is little *or no* discharge In cases of this variety the most important points in the diagnosis of suppurative inflammation of the autrum are

1 If there is no discharge there is likely to be much pain from the pent up secretions

2 Disease about the roots of the teeth is apt to be present, and

3 The history will often point to the origin of the disease

In a case with only moderate discharge and no pain, or history of an acute attack, the absence of diseased teeth and the position of the pus far back in the nasal cavity would point to disease of the ethmoid cells instead of the cavity of the antrum

Polypi, or malignant growths of the antrum, can only be detected when they have protruded, or when the cavity has been opened

The progress of the disease is usually slow, unless appropriate treatment be adopted When the opening into the naris is completely closed the patient suffers severe and exhausting pain, the pent up secretions cause gradual distension of the walls of the cavity, which may encroach upon the orbit, nasal cavity or palate, or which may cause marked bulging and deformity of the cheek If left to itself the cavity may open in any of these directions In some instances the putrid secretions that are swallowed cause serious derangement of the digestive organs and a gradual decline in health

In acute inflammation of the antrum medical treatment by fomentations, local blood letting, and salines, is important, but when suppuration has taken place surgical measures must be adopted Free exit must be given to the pus, preferably through the alveolar process When a diseased tooth is found to be the cause, it should be extracted and the opening left by its fang enlarged sufficiently to allow free drainage Sometimes the abscess points just above the teeth at the alveolar process, and then may be opened in that position, but this is not a favorable point for the opening on account of the difficulty of keeping it patent

If the teeth are sound it is best to draw the first molar, as its sockets are deeper than those of others, and it is the most liable to decay, but if the patient has already lost one of the upper bicuspids or molars the antrum may be entered through the space left It has been objected to selecting this spot that the bone where a tooth has been lost some time previously is much harder than elsewhere, but this offers no serious impediment to the operation, therefore it seems unwise to sacrifice a tooth

The opening may be made with a common trochar but a bone drill answers the purpose better The drill may be worked by a dental engine, but this is unnecessary, as with a conical burr bone drill the opening is easily made by hand in three or four minutes Care should be taken to hold the drill so that as it enters the cavity it may not plunge suddenly through and wound the opposite wall The opening should be drilled on a line with the internal canthus of the eye upon the same side, which insures striking the central position of the antrum providing it is of normal shape Occasionally the antrum varies much from the typical size and shape, and in a few instances bony septa have been found traversing it In cases of this kind it is necessary to scrape out the partitions sufficiently to allow thorough cleansing

It is best to make a comparatively large opening about a quarter of an inch in diameter in order that it may be easily kept free, and that drainage and washing may be perfect During the treatment the opening should be filled with a roll of cotton or gauze to prevent the entrance of food and to delay healing until

the lining of the cavity has become healthy, or it may be kept patent by a small metallic tube which a dentist may fasten to an ordinary plate and which may be closed while the patient is eating by a small cork After the operation the subsequent treatment of the case consists of washing out the cavity with antiseptic and astringent solutions I have used with greatest satisfaction a spray or small injection of per oxide of hydrogen three or four times a week and a wash of listerine ʒss—ʒi to ℥i of saturated solution of boric acid twice a day This wash should always be used luke-warm

If there is no necrosis of bone the case may be expected to recover in from two to six weeks, though occasionally a tendency to renewed inflammation may make it expedient to keep the opening much longer

I have seen six cases of this disease

Case 1 was that of a man about twenty five years of age who came to me six or seven years ago He suffered no pain and complained only of catarrh There was a free opening into the naris and the dis charge was not very abundant The annoyance was so slight that he disliked to have the antrum opened I saw him about five years later and found him still in the same condition He had done nothing for it and still objected to the necessary operation

Case 2 Mrs A D C, æt 44, came to me from Wisconsin two years ago For one year had been troubled with discomfort and often pain in the left cheek, which became worse and swelled whenever she took cold She was also annoyed by a purulent discharge from the nostril and into the throat I found that there had been a spontaneous opening into the mouth which had left a small fistula, but it was so small that pus constantly filled the antrum and escaped from the nose I had the cavity syringed out through this small opening twice a day with a satur ated solution of boric acid In three weeks the purulent discharge had entirely ceased, but the washing was continued less frequently for four or five weeks longer The patient had suffered slightly for eight years with rheumatism, which may possibly have been the cause of the disease in the antrum For this she was given small doses of iodide of potassium She returned to her home apparently perfectly cured and I have reason to believe there has been no return of the disease

Case 3 Mrs J L F, æt 48, came to me in February of this year complaining of pain in the left cheek with some purulent discharge into the left naris The trouble had begun four years previously when she had had her teeth drawn I found that there had been a fistulous opening near the site of the canine tooth, but of this there now remained only a *cul de sac* about three eighths of an inch in depth and an eighth of an inch in diameter Through this I perforated the antrum with a drill, and subsequent ly washed the cavity with peroxide of hydrogen and had her inject it twice a day with a warm saturated solution of boric acid At the end of three weeks all purulent discharge had ceased and the patient felt perfectly well She then returned to her home with instructions to continue the wash for two or three weeks

Case 4 E R, at 34, came to me March 8th, 1887 He had suffered greatly with the nasal symp toms of suppurative inflammation of the antrum for about two years, though during a part of that time he had been free from the symptoms This had been caused by a diseased tooth which the dentist had tried to save until six months previous to his consulting me—when it had been drawn Subsequently he seems to have nearly recovered, but for two months he had been greatly distressed by the offensive discharge into his throat I opened the cavity with a large drill at the site from which the first molar had been removed and subsequently washed the cavity as already recommended At the end of three weeks there was very little purulent discharge but the opening was closing rapidly I did not see the patient for a week afterward, but he then reported that two or three days after his last visit the opening closed completely and remained so a few days when he again began to have pain in the cheek I then enlarged the canal with the same drill and renewed the treatment Three weeks later the secretion of pus had entirely ceased There was no secretion of pus for a week afterward, when he caught a bad cold and the cavity filled with muco pus in thirty six hours, during which time he had omitted to remove the pledget of cotton from the opening In this case the inferior turbinated body was greatly swollen and the opening into the nostril from the antrum comparatively large I thought that the secretion from the nose had filled the cavity, I therefore cauterized the turbinated body to reduce its size Continued the same local treatment and directed him to have a tube fitted to the opening to keep it patent for several months He did not follow this advice, but allowed the opening to close, however, there has been no purulent discharge since

Case 5 Mrs I, æt 36, sent to me from Minnesota March 22, 1887 Suppurative inflammation of right antrum, due to a diseased tooth, of a year's duration I opened the antrum as in the last case and used the same local treatment At the end of three weeks all purulent discharge had ceased and it has not returned But the cavity was kept open for two months and then she was directed to leave out the cotton and allow it to heal Recovery seems perfect

Case 6 A young woman æt about 25 Has complained of catarrh for many months, and recently of swelling of the right cheek and a gum boil near right canine tooth The symptoms and signs in this case are very indistinct, but Dr Brophy confirms my sus picions of suppurative inflammation of the antrum I expect to open the cavity soon

64 State Street, Chicago, June 9, 1887

SOME CASES OF COMPOUND FRACTURE, WITH REMARKS ON TREATMENT

BY J A WESSINGER, M D,

OF HOWELL MICH

MEMBER MICHIGAN STATE MEDICAL SOCIETY CORRESPONDING MEMBER DETROIT MEDICAL AND LIBRARY ASSOCIATION

Case 1 —About noon on June 19, 1886, H M,

æt 32, married, railroad conductor by occupation, was thrown from his train immediately in front of a flat car which was backing up at a rather high rate of speed, both wheels of the rear truck passing over patient's legs below the knee I saw the injured man about forty minutes after the accident He was suffering somewhat from shock, from which, however, he soon rallied under mild stimulation He was placed in a large room on the first floor at his boarding house A bed having a hard mattress was used, and all furniture removed from the room except a table and chairs Preceding the anæsthetic I gave a hypodermic injection of ⅙ gr morphia Anæsthesia was then begun with pure chloroform (Squibb's) In fifteen minutes the patient was thoroughly under the influence of the anæsthetic An examination of the injured parts was now begun After removal of the clothing we found a compound comminuted fracture of both bones of the right leg, and extreme laceration of all the important soft tissues, both the anterior and posterior tibial arteries were severed, but hæmorrhage had not been severe The tibia and fibula of the left leg were fractured through the upper third On consultation with other surgeons present it was decided to amputate the right leg below the knee, the left leg to be treated with suitable splints After adjusting the Esmarch bandage, I performed bloodless amputation by the antero posterior flap method, four inches below the right knee The instruments, sponges, and ligatures used during the operation, were kept in a 10 per cent solution of carbolic acid

After the amputation was completed the stump was irrigated with bichloride solution, 1 1,000, then the flaps brought together with silver wire, a drainage-tube inserted, and the stump dressed with dry antiseptic gauze held in place by a few turns of the roller bandage The fracture of the left leg was then reduced and suitable wooden splints adjusted By this time the patient had recovered from the anæsthetic, another hypodermic of ⅙ gr morphia was given, and our patient left to rest in a clean bed which had been prepared during the operation Everything looked favorable for a good recovery During the evening of the same day I saw patient again, he had taken some light food, bowels and kidneys had operated normally He seemed to feel cheerful, and congratulated himself on his escape from more serious results during a railroad accident

June 20 At 9 A M I saw patient again Temp 99°, pulse 90, full, soft, regular, some pain at seat of fracture, no pain in stump Patient had slept well after midnight on having taken ⅛ gr morphia Had taken breakfast of beef-tea, eggs and milk Patient cheerful and comfortable At noon of this day I received notice, purporting to have come from the patient, that my services were no longer needed and that other physicians had taken charge of the case Nothing was said, and the man left to his fate I afterward learned, to my chagrin, that the methods by which the patient passed into other hands were much more unique than honorable Suffice it to say that all antiseptic methods of treatment in this case were now discarded, the stump was left open, and simply a cold water dressing applied, which was renewed daily The fracture was put up in plaster of-Paris, *no cotton batting was used*, simply a drawer leg between the plaster and the man's skin (a most lamentable and inexcusable blunder) I soon heard that the patient was going from bad to worse, the limb that had been "done up" in a plaster of Paris vice (for such it was in this case) became intensely swollen, the foot discolored, and finally, at the earnest solicitation of the patient, the plaster was removed, when a large slough presented itself on the inner aspect of the limb over the seat of fracture This sloughing surface separated, and the injury was thus transformed from a complete to a compound fracture with very unhealthy condition of tissue surrounding The cold water treatment was continued as before Condition began to be more unfavorable from day to day, until the twelfth day after injury, when a wild delirium developed, with a high temperature (104 5°, according to the nurse), some emesis, anorexia, diarrhœa, profuse sweating, granulation process in stump has ceased, sloughing process in left leg extending, and emitting a very offensive odor

At this time Dr W J Herdman, of Ann Arbor, Mich, surgeon in chief of the road, saw the patient, and gave a very unfavorable prognosis, as the man was suffering from advanced septicæmia At the earnest solicitation of the relatives of the patient, I saw him again on the twenty seventh day after the accident The only thing to do at this stage of the case was to pay the last tribute of relief to a dying man, and I so informed the friends I found the patient almost pulseless, markedly tympanitic, a low muttering delirium Temperature 97°, involuntary green stools, urine offensive I also found a large abscess in the left thigh which, on being incised, discharged a large quantity of fetid pus Another large abscess was detected between the muscles above the crest of the ilium on the right side, this was filled with a mass of stinking pus The stump had not healed and was sloughing, the fractured bones in the left leg were bare, and the upper fragment of the tibia was denuded of periosteum about 1½ inch back from line of fracture The bones had not united and were being rapidly disintegrated at the injured points I irrigated the wounds thoroughly with bichloride solution (1 1,000), and put the patient on brandy, quinine, and digitalis However, he did not rally, and finally died on the thirtieth day from date of injury He was markedly jaundiced, and probably the subject of pyæmic (metastatic) abscess of the liver No autopsy

Case 2—C R A, male, married, æt 24, has always been healthy By occupation a brakeman on railroad About noon on June 29, 1886, while unloading gravel from a construction train, the wire cable struck the patient on the right leg with sufficient force to produce a compound comminuted fracture of the tibia in the lower third I saw the patient about ten minutes after accident His condition at this time was as follows No shock, very little hæmorrhage, large lacerated wound in lower third of right leg, fragments of bone exposed to view The patient having been anæsthetized, and the wound

thoroughly irrigated with a 1 1,000 bichloride solution, I proceeded to repair the injured parts Found the upper end of the tibia broken squarely across, while the lower part was fractured obliquely, very ragged, and denuded of periosteum to about one inch below the line of fracture All fragments of bone and lacerated tissue were carefully removed, the bone denuded of its periosteum was exsected, and a free opening made through the limb posteriorly for drainage All operative measures having been completed, the wound was again irrigated with the bichloride solution, a drainage tube inserted, and the wound dressed with moist sublimated cotton The limb was now placed in an ordinary fracture box having a slot over seat of injury, and moderate extension applied The combined length of bony fragments removed was 1¼ inch The wound began to repair immediately, the patient had no untoward symptom, the temperature reached 101° on but two occasions, and at eight weeks from date of injury the patient was able to walk on his foot The moist sublimated dressing in this case was renewed every twelve or twenty four hours, and continued until the wound had been filled in with granulations, when the moist dressing was withdrawn and dry boric acid dressings substituted This was continued until the healing process in the wound was complete This man began work again as watchman at a railroad crossing ten weeks from date of injury, here he received a slight injury at the point of fracture, which, however, was soon repaired by rest to the limb, by means of a plaster splint adjusted by Dr W J Herdman, of Ann Arbor, where the patient was living at this time I saw the patient about two weeks ago, when he was in all respects as sound as ever, although a shortening of about ¼ inch was still present

Case 3 —Wm P , æt 55, married, carpenter Has never received a severe injury, but is addicted to the use of alcoholic drinks On August 21, 1886, he fell a distance of twenty five feet, striking first upon the heel of his left foot, then upon the left knee I saw the patient about ten minutes after the injury On examination under an anæsthetic, I found dislocation outward of the astragalus, with Pott's fracture of the fibula, and a compound complicated fracture of the tibia and fibula in the upper third of the same leg, the injury at this point consisting of a transverse fracture of the tibia and fibula three inches below the knee joint, and also a longitudinal fracture of the tibia running into the joint The outer and inner tuberosities of the tibia were both distinctly movable Over the line of transverse fracture was a deep penetrating wound caused by a large nail or other pointed object Hæmorrhage was quite severe, patient suffered somewhat from shock, from which, however, he soon recovered I reduced the dislocation at the ankle joint and placed the lower limb in Koehler's adaptable splint (carbolated) Adjusted the fractures above, and irrigated the wound with 1 1,000 bichloride solution The whole limb was then placed in a fracture box, with moderate extension and counter extension, and the wound dressed daily with moist sublimated cotton

On the third day after date of injury the temperature was 103° Pulse 110, hard and bounding I began to feel fearful of my patient Suppression of urine and fæces I used a Nélaton's catheter, which relieved the bladder, and gave a brisk cathartic On the fourth day the temperature had gone down to 100°, pulse 110, patient feeling better, circulation in foot good From this date temperature and pulse gradually went down until the end of the second week, when both were normal, where they remained until recovery Patient began to eat, bowels regular, sleeps well This course was not materially changed until November 10, 1886, or ten weeks from date of injury, when patient began to walk with crutches, and at the present writing the patient's limb is practically as good as ever, although there is about one half inch shortening, with some contraction of the plantar fascia

Case 4 [1]—Male, æt 26, married On September 8, 1884, while riding over a bridge on a traction threshing engine, the bridge suddenly gave way, precipitating engine and patient into the river below In this accident the right limb of the patient was caught between the heavy traction chain and the forward wheel of the engine, thus producing an extensive lacerated wound, with an oblique fracture of the tibia at the middle of the lower third of the leg I saw the patient shortly after the accident, and found him suffering somewhat from shock, and faint from the loss of blood Several fragments of bone were removed, and the bleeding vessels controlled by torsion and ligature Splints were adjusted with an aperture over seat of injury, and the wound dressed with carbolized cotton This was laid aside on the third day after injury, owing to symptoms of carbolic acid poisoning, and iodoform dressings used instead, which were renewed daily The temperature in this case did not go above 102°, and no untoward symptoms developed from day of injury until final recovery, with the exception of the slight toxic effects of the carbolic acid The patient has a sound limb, and is able to follow his vocation as a farmer

Case 5 —Male, æt 14 On October 16, 1886, he sustained a compound dislocation of the ring finger at the metacarpo phalangeal articulation The injury was caused by a base ball striking the end of the finger with great momentum, throwing the phalanx out so that it rested on the dorsum of the hand I saw the patient about ten minutes after the accident Very little hæmorrhage Advised amputation, but this was refused by the parents I then reduced the dislocation, irrigated the wound with bichloride solution, applied a splint to the palmar surface of the finger, and dressed the wound with moist sublimated cotton This dressing was renewed daily, with bichloride irrigation The wound began to heal immediately, and on November 23 the patient was discharged cured, with a useful though somewhat deformed finger

Remarks —In *Case 1* we have a man than whom none had better prospects of recovery at the beginning, yet as soon as antiseptic treatment was withheld the patient began to fail His wounds ceased

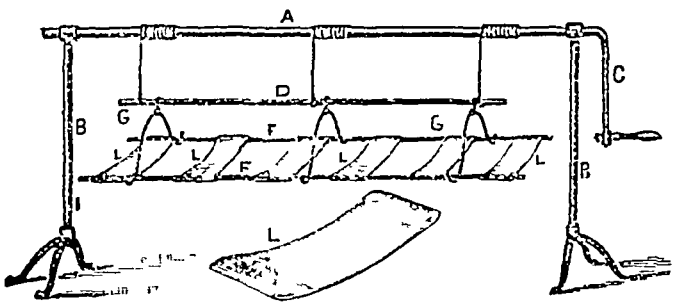
[1] Reported in Medical Age vol iii p 292

to heal, became very fetid, and he went down under the devouring fire of septic poison In the other four cases antiseptics were rigidly adhered to, the wounds were free from odor, healthy in appearance, and the process of repair went steadily on to recovery In *Case 1*, could the exact condition of the injured bones in the left leg have been known, a synchronous amputation might have saved the patient's life In treating these severe injuries the following are some of the precautions necessary

1 Close attention to all the details Keep all general attendants away from the wounds 2 Absolute rest at the point of injury 3 Look closely after the general health of the patient Don't take anything for granted 4 See that a proper mental and physical balance is maintained

Absolute rest at the point of injury cannot be too strongly emphasized, since success or failure in treatment depends largely on the attention that is given to this principle

In this connection I desire to call attention to a device which has been of inestimable value to me in the treatment of these cases This apparatus is original with Dr W J Herdman, of Ann Arbor, Mich, and is known as "Herdman's Lifting Device" This apparatus is simple in construction, durable and cheap It is made of ordinary gas-pipe and wrought iron, and any ordinary machinist can make one One man can lift a patient from the bed without causing any pain whatever, and at the same time greatly add to the comfort of an injured person, while a change of bedding or other clothing is being made The following cut will fully illustrate the construction of the device One thing to be remembered in constructing this device is, that the cross-bands must be the same in length as the distance between the cradle hooks



HERDMAN'S LIFTING DEVICE

A, cross bar B, legs C, crank D, cradle L, L, L, L cross bands, loop stitched at ends for sliding bar F, sliding bar G, cradle hooks The device should be long enough to swing over the bed The cradle is then lowered, the bands passed under the patient, the sliding bars passed through the looped ends of bands, then into the hooks, when a few turns at the crank lifts the patient bodily from the bed

Finally, in the language of a well-known writer [2] "In the light of the researches of experimenters in the field of bacteriological science, and the experience of those who, acting upon the suggestive results derived from these experiments, treat wounds antiseptically, in my opinion, the surgeon who does not take into account every possible source of danger that may overtake his patient, including in this the noxious influences arising from the entrance of germs into the tissues, is criminally negligent, and directly responsible, both to his own conscience and to the world at large"

I am greatly indebted to Dr H N Spencer for valuable services rendered during the treatment of these cases

[2] Geo R Fowler, M D, in New York Medical Journal

ON THE TREATMENT OF FELON WITHOUT INCISION

Read in the Section on Medicine, Materia Medica and Therapeutics, at the Thirty Eighth Annual Meeting of the American Medical Association, June 7, 1887

BY L DUNCAN BULKLEY, A M, M D,

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The teachings of instructors in surgery, and also those in the text books on the subject, are all to the effect that felon, paronychia, or whitlow, will require sooner or later a free, deep incision, even to the bone, and that in the majority of cases the sooner this is done after the diagnosis is made, the better I believe, also, that careful inquiry would show that this is the almost universal practice both of those who follow surgery more particularly, and of general practitioners But little is found in writings in regard to the medical and internal treatment of these cases, other than the suggestion that tonics are often needed, and the almost universal recommendation is that poultices should be applied, both before and after the incision

Having had quite a considerable number of cases of felon under my care in public and private practice, some of them being very severe, and having pursued a very different course of treatment from that usually followed, as far as I can learn, I beg to present the matter briefly, in order that others may make trial of the same methods, which, as I believe, have advantages worthy of consideration

I will not attempt to enter into any anatomical or pathological study of the parts concerned, or of the affection under consideration, but in order not to be misunderstood I wish to state that by felon and whitlow I refer to the cases familiar to all, in which there is deep seated inflammation, mainly of the ends of the fingers, tending to penetrate even to the bone, and ultimately, if unchecked, to cause necrosis of the same Some of my cases have been light and have remained superficial, others have been first seen when the inflammation had already penetrated deeply, when the finger was hot, tense and hard, and exceedingly painful on pressure, and even after the patient had already passed sleepless nights with the throbbing pain But for many years I have never incised a case, other than a possible slight prick, without pain, into dead skin after the pus had become superficial, nor have I ordered a poultice for such a case within the same period of time

While a certain number of cases of whitlow seem to have their origin deep in the tissues of the finger, or even in the periosteum, in the majority of cases the inflammation appears to originate, and probably does, in a relatively superficial injury, as a prick of a pin, or needle, or nail, a scratch, or other appar-

ently trivial accident, to which little or no attention is paid at the time As is well known, when the inflammation has once started it proceeds with considerable rapidity, and three or four days after its beginning the patient may be suffering agony from the deep seated, tense, throbbing pain, and the entire tissues of the finger are found to form a firm, hard mass, exquisitely sensitive to pressure

The reason for the ready and rapid extension of the inflammation from the superficial to the deep structures is undoubtedly found in the anatomical peculiarities of this part, which consist in the existence of fibrous threads extending from the skin to the periosteum, binding all the parts firmly together, along these connective tissue bands the inflammation travels from without inward with ease, and it is also because of the existence of these connecting fibres that, under the treatment now proposed, in a deep-seated inflammation, originating even in the sheath of a tendon or the periosteum, the pus may find exit without causing great damage, as will be presently shown

As an element in the production of whitlow the general condition of the patient must always be taken into consideration, and especially that unknown but still recognized state manifested by the tendency to form pus, the pyogenic habit, as it was formerly called Every prick of a needle or nail in the end of the finger does not result in a felon, nor in a given number of subjects could it be produced in any great proportion of instances by any amount of injury to the finger tip, nor can it be produced at will even in those who are ever so much run down in health, as in so many other conditions of disease, some predisposing cause which causes what might otherwise be an innocuous prick to become the beginning of a serious inflammatory process Its localized phenomena would almost point to an infectious origin, received with the wound, were it not that many cases originate deeply without external puncture

The treatment which I would advocate, and which has proved valuable in my hands, consists both of general and local measures, and has for its aim the checking of the inflammatory and suppurative process rather than the encouragement of suppuration, as is ordinarily done by poultices

Patients even with a beginning felon are commonly found to be in a state of lowered vitality, often with more or less of a sluggish condition of the digestive organs, coated tongue, loss of appetite, etc Unless it is contraindicated I generally begin the treatment with a mild cathartic, the following being that commonly employed

℞ Ext colocynth comp
Mass hydrarg ää gr x
Pulv ipecacuan gr ii
M Div in pil No iv Sig Take two at night and two on the second night after

A tonic is administered from the first, one containing iron being preferred, that usually given is a combination known as Startin's mixture, which has considerable power in controlling inflammatory affections of the skin The formula of this is as follows, the proportions being somewhat altered to suit individual cases

℞ Magnesii sulphatis ℥i
Ferri sulphatis ℥i
Acidi sulphurici dil ℥iv
Syr zinziberis ℥i
Aquæ, add ℥iv
M Sig Teaspoonful in water, through a tube, after eating

In addition to this it is my custom to administer the sulphide of calcium (calx sulphurata) from the beginning to the end of the treatment I usually give it in the form of ¼ grain gelatin coated pills, one being given every two hours irrespective of food or other medicine In order to have any good effect from this latter drug it is essential that it should be fresh and pure, for, as is well known when exposed to the air it rapidly loses its free sulphur and becomes converted into the inert sulphate of zinc, or gypsum It cannot, therefore, be well given in powders or tablets, nor even in extemporaneous pills, but is best administered in those well coated with gelatin, which preserves the drug unaltered, it is well, however, to test the pills by biting them, when the characteristic odor of sulphuretted hydrogen becomes at once noticeable if the article is good

Some attention to the diet should also be paid in these cases, and specific directions should be given Alcohol in all forms should be absolutely interdicted, and the malted liquors appear to be also very harmful The diet should be full and nourishing, but not stimulating Milk is often given, sometimes in the form of punch and egg nog, but, as I have elsewhere explained very fully, I believe that milk is not a desirable article to take in connection with other food, and my constant direction is that it should be avoided at the meals On the other hand, it serves a most admirable purpose in raising the vital tone of these patients if given separately and alone, in the interval between the meals, preferably one hour before each meal, and late at bed time, avoiding, however, taking it within half an hour of the granules, or of any other substance in the stomach Tea and coffee may be taken in moderation, but unnecessary and indigestible articles should be avoided

The local treatment of felon which I have followed has the merit of great simplicity and is one which can be readily followed out by every one It consists simply in the constant any very thorough envelopment of the affected part in a protective ointment from the beginning to the end of treatment The application used is the diachylon ointment of Hebra, which, when properly prepared, forms a most agreeable and soothing dressing

Of late years it has been suggested to make the diachylon ointment by melting lead plaster with various oils, or vaseline, and much that is supplied on prescription will be found to be prepared in this manner But this by no means answers as well in many conditions of the skin as that prepared according to the original formula given by Hebra, probably because the added portion of the oil has not undergone decomposition with the litharge I am therefore very particular to have the ointment prepared according to the original formula, which is as follows

℞ Olei olivarum optimi -- ℥xv
Plumbi oxidi ℥iij ℥vj
Olei lavandulæ ℥ij

℞ Add the oil to two pounds of water and heat it with constant stirring, the litharge is to be slowly sifted in while it is well stirred, fresh water being added as required The ointment is to be stirred until cold, and the oil of lavender then added *In winter a slightly larger quantity of oil is required to make a soft ointment*

When properly made according to the above directions the ointment is soft and unctious, and not very sticky It is to be spread upon the woolly side of lint *very thickly*, even a quarter of an inch or more in thickness, so as to completely envelop the end of the finger in a thick mass of the ointment, this is then lightly bound on and left undisturbed as long as possible, generally it is best to renew the application twice daily, and if there is no discharge the same dressing may have fresh ointment spread upon it, and be replaced quickly The affected part should not be handled at all, nor the ointment scraped off even, the idea being simply to keep it continuously in the mass of bland, protective and absorptive ointment, to allow the inflammatory process to subside

The first application of the ointment is described as being soothing and pleasant in the extreme, in mild cases just beginning it allays the irritation and pain at once, and even in those who had had sleepless nights from the pain, I have had them tell me that the relief was almost complete, and that they had slept the night after the application although in one or two instances the relief was more gradual

Under the treatment above described some suppuration commonly takes place In lighter cases, where the inflammation has begun superficially, one or more small points appear beneath the epidermis, which either break themselves or may be opened absolutely without pain through a slight prick in the dead covering In those where the disease has begun more deeply, or where it has penetrated to some depth before treatment, the progress is more slow, and a week may be taken before the pus comes near the surface, but then it shows itself also in one or more points, never very large, and the discharge may be hastened by a slight prick through the dead epidermis

In one or more cases under my care small spiculæ of bone have been discharged, but still the case progressed satisfactorily without deep incision After the opening the ointment is to be still continued in the same manner, the dressings being renewed more often if there is much discharge, until finally the openings close and the parts resume a normal condition

The duration of the treatment of these cases compares very favorably with that of those treated in the ordinary manner with poultices and incision I do not think that any of them have been obliged to use the ointment more than three weeks, and in the milder cases all trouble has sometimes subsided in a week or ten days

My first cases were treated in this manner fully ten years ago, since which time I think I have applied the treatment to a dozen or more cases in public or private practice I cannot, of course, vouch for all the cases I have seen, as to the final results, as all know the uncertainty attending out patients in hospital practice, but I know of the complete success in a number of this class, and could give histories from notes of cases seen in private practice if time permitted

A single case may be briefly mentioned Mr J B , a gentleman aged 38, is now under treatment for another trouble, two years after his felon, for which I treated him in this manner In this case there had been intense, deep pain, which was relieved almost entirely by the ointment About a week after beginning treatment pus was discharged and several spiculæ of bone followed, but all healed quite rapidly, and now, when examined recently, the scar on the right forefinger is seen to be supple, and the integrity of the finger perfectly preserved

I am quite aware that there may be cases in which this plan of treatment may not be applicable, but such have not as yet come under my observation I shall look with interest for the experience of those who have opportunities of seeing more cases, and more severe ones, perhaps, than have come under my care, and feel confident that if the plan of treatment I have sketched is carried out thoroughly, it will be found to give good results certainly in a share of cases, and will certainly prove more acceptable to the patient than the annoying application of poultices and the much dreaded incision with the knife

DISCUSSION

DR NORMAN BRIDGE, of Chicago, had used vaseline, cosmoline and belladonna applications

DR NORTH, of Waterbury, had immersed the finger in a strong solution of iodine, where pus was not already formed, with good results He immersed the finger three times a day for five minutes each time

DR POWELL, of Indiana, had used oleate of morphia to relieve pain, keeping some constantly applied It has given great relief

DR ZEISLER, of Chicago, said that ichthyol relieves pain to a great extent, even if it does not prevent suppuration

DR LOSS, of Pennsylvania, has dipped the finger in hot water for a half hour and then dipped it in collodion

DR C C P SILVA, of Chicago, said that water at a high temperature will prevent suppuration if abscess is in its incipiency and superficial Water will not do so if the process is deep seated

DR PORTER, of New Hampshire, had used water and iodine For last five years he has used iodine and then pressure, by a plaster and roller bandage, using as much pressure as the patient will bear without severe pain Pressure on the muscles may prevent congestion and suppuration

MEDICAL PROGRESS.

TROPHIC NERVES —The actual demonstration of the existence of trophic nerve fibres, apart from vaso motor fibres, has not until recently been made, although many evidences pointing to that conclusion have been put forward DR JOSEPH, of Berlin, in a number of experiments on cats, produces facts which go to prove the existence of trophic nerve fibres in the peripheral nerves The complication of vascular changes induced by the removal of the vaso motor fibres from a part must be excluded in order to prove definitely that any nutritive changes occurring after section of its nerve are due to the loss of trophic influence These conditions were carefully considered, and in order to avoid any vaso motor changes, the second cervical nerve was selected for section, which, as will be seen, contains no vaso-motor fibres This nerve was used in all the experiments Mere section of the trunk of the nerve produced no effect, as reunion rapidly took place, so that it became necessary to remove a considerable portion of the trunk to prevent this occurrence In some of the animals the ganglion on the posterior nerve root was also removed The changes induced were limited to the area of distribution of the nerve, and in those where the ganglion was removed similar changes occurred in the cutaneous area of distribution of the fifth cranial nerve of the corresponding side, coming on in different animals at a period varying from five to twenty seven days The changes consisted in loss of hair, at first localized, afterwards gradually extending, situated above and behind the ear where the trunk was only severed, above the eye and over the cheek, where part of the trunk and the ganglion on the posterior root were removed After a time complete baldness and a shiny atrophied state of the skin made their appearance No increased vascularity, inflammation, or any other change whatsoever could be discovered in the skin The hair was examined for parasites, but none could be found Microscopic examination of the skin failed to detect anything beyond atrophy of the hair follicles, there was no evidence of inflammatory or other changes From these experiments Dr Joseph concludes that trophic nerve fibres exist apart from vaso motor fibres, and entirely independent of them, and he explains the similar changes in the area of distribution of the fifth cranial nerve by assuming that it derives its trophic supply from the ganglion on the posterior root of the second cervical nerve from which fibres join the ascending root of the fifth —*Virchow's Archiv*, Bd cvii, Hft 1 —*The Practitioner*, July, 1887

THE ACTION OF ACONITE UPON BODILY TEMPERATURE —DRS LAUDER BRUNTON and J THEODORE CASH have, in a research upon the action of aconite upon bodily temperature ("St Bartholomew Hospital Reports," vol xxii), reached the following conclusions

1 That in pigeons aconite acts as an antipyretic, both in large and small doses

2 This antipyretic action is exerted whether their body temperature be normal, or be artificially raised, or artificially reduced, at the time of the injection of the drug In all cases the injection causes the temperature to fall

3 This fall is usually less in birds which have been artificially cooled than in birds whose temperature is normal, or has been raised artificially

4 The action of the drug is apt to be modified by individual peculiarities in the birds which we are at present unable to explain

5 The temperature returns more rapidly and completely towards the normal when the birds which have got aconite are kept in a warm place, although the primary fall induced by the administration of the drug may have been as great as, or greater than, that observed at medium temperatures

6 A repetition of the dose after the effect of the first one has passed off causes a fall which is apparently uninfluenced by the first dose

7 It is occasionally noticed that a large dose may cause a fall of temperature which is smaller but more prolonged than that caused by a smaller dose

8 In guinea pigs cooling appears to retard the fall of temperature caused by the drug, and also to retard the return to the normal

9 The temperature of animals exposed to a heated atmosphere is but little affected by aconite, in fact, large doses may diminish the resistance of the animal to the effect of external heat, and cause the temperature of an animal to rise higher than that of one to which no aconite has been given

10 If the animal be exposed to cold when the drug is administered, the fall of temperature is both more rapid and more extensive than in the normal animal —*The Therapeutic Gazette*, April, 1887

HÆMOGLOBINOMETRY — In the *Correspondenz Blatt für Schweizer Aerzte*, No 10, 1887, p 299, Dr Herman Sahli, of Berne, writes that, having found Gower's hæmoglobinometer practically useless in artificial light, in consequence of the apparatus having too high figures under such conditions, he has prepared a new standard mixture of picric acid and carmine, which, under artificial illumination, has the same optical properties as a 1 per cent solution of hæmoglobin In daylight the color of the two solutions is quite different When the comparative procedure is undertaken, the tubes (one containing the blood to be examined, another containing Sahli's solution) must be placed against the white globe of a petroleum lamp or against a sheet of thin white paper held between the tubes and a candle A series of control experiments showed that the results obtained by examining the blood with Sahli's solution in the evening, were almost identical with those given by the usual method in daylight —*The British Medical Journal*, July 9, 1887

THE TREATMENT OF LUPUS BY INJECTIONS OF CORROSIVE SUBLIMATE —DR INGINIO TANSINI, of Lodi (*Gazetta degli Ospitali*, June 12th), narrates the treatment of a case of lupus of the nose and face by

means of repeated injections of corrosive sublimate He began with a weak solution corrosive sublimate 50 centigrammes, distilled water 100 grammes This produced no reaction of any kind A stronger solution—corrosive sublimate 1 gramme, distilled water 100 grammes—was then used This produced some tumefaction and œdema in the neighborhood of the punctures, and slight suppuration in some of them Some fourteen or fifteen injections of a few drops were practised Improvement soon became marked, and eventually all traces of the disease disappeared, the only marks left being those of the punctures in which suppuration had taken place Dr Tansini was led to try these injections by the following considerations 1 That lupus is a form of tubercle 2 That the bacilli are few and have no tendency to diffuse themselves 3 That corrosive sublimate has proved certainly destructive to bacilli He claims advantages for this method on account of lessened pain and disturbance and superior cosmetic results —*The Lancet*, July 9, 1887

THE FUNCTION OF THE URETERS —A SAMSCHIN, after referring to observations made by others in cases of exstrophy of the bladder and vesico vaginal fistula, reports his own experiments in a case exhibiting a large *recto-vesico-vaginal* fistula, in which, with the aid of a speculum, he was able to expose the openings of the ureters plainly to view His conclusions are as follows

1 Contraction of the ureters takes place in both man and the lower animals in a peristaltic manner Each contraction results in the discharge of a variable quantity of urine

2 The contractions at the vesicle orifices of the ureters do not take place synchronously

3 The number of contractions observed at the orifice of a ureter in a given time is not constant, but is found to vary with each observation

4 The total quantity of urine discharged by each ureter in a given time varies, as well as the average quantity discharged by each in a single contraction, the latter quantity varies between 8 and 2 ccm

5 The maximum of quantity discharged by a single contraction amounted to 4 ccm

6 No increase in the number of contractions was observed to take place after the copious injection of fluids —*Centralbl f Gynak*, No 19, 1887

SEDATIVE ACTION OF ANTIPYRIN ON THE SPINAL CORD —M CHOUPPE, at a recent meeting of the Société de Biologie, described experiments which confirm those of Germain Sée in regard to the diminution of reflex excitability by antipyrin M Chouppe's experiments consisted in attempts to neutralize the convulsive action of strychnine by antipyrin In this he was successful With a dog to whom strychnia had been given in doses that produced convulsions so severe as to make death imminent, it sufficed to use 2 grains of antipyrin hypodermically to render breathing once more regular and natural

In the discussion which followed M Gley called attention to the well known fact that large doses of antipyrin produced convulsions similar to those of strychnine poisioning, and asked how this fact was compatible with a lessening of reflex excitability in the cord M Brown Séquard suggested that the opposing action of antipyrin to strychnine might be similar to the opposing action of different bromides and some other substances For instance, bromide of potassium alone will produce bromism which the same dose of mixed bromides will not

M Laborde claimed that as a general rule it was true that substances that in small doses were anticonvulsive, in large doses were convulsives, and vice versa —*Semaine Medical*, July 6, 1887

SIMPLE METHOD OF ARTIFICIAL RESPIRATION —In the *Brit Med Jour (London Med Record)*, MR J A FRANCIS describes a simple method of artificial respiration which, he alleges, combines all the advantages of the Marshall Hall, Sylvester and Howard methods, without any of their disadvantages The plan is as follows

The body of the patient is laid on the back, with clothes loosened, and the mouth and nose wiped Two bystanders pass their right hands under the body at the level of the waist, and grasp each other's hands, then raise the body until the tips of the fingers and the toes of the subject alone touch the ground, count fifteen rapidly, then lower the body flat to the ground, and press the elbows to the sides hard, count fifteen again, then raise the body again for the same length of time, and so on, alternately raising and lowering The head, arms and legs are to be allowed to dangle down quite freely when the body is raised The author alleges that this method is most successful, and is so simple that any one can perform it without any teaching

ADMINISTRATION OF PHOSPHORUS —SOLTMANN recommends an oily solution, 1 500 Gr iij of phosphorus are dissolved in ℥iij ⅛ of oil of almonds over a water bath If the phosphorus has been previously dried thoroughly, and the process carefully conducted, no phosphorus is deposited We may order

℞ Phosphorus gr ⅙
Cod liver oil ℥iij ⅛ ♏
S —One teaspoonful daily

Or the following formula may be used

℞ Phosphorus gr ⅙
Oil bitter almonds ℥ij ss
Distilled water ℥ss
Gum arabic ℥ij ss
♏ Make an emulsion
S —One teaspoonful daily
—*Therapeutische Monatshefte*, May, 1887

APOMORPHINE AND MORPHINE IN WHOOPING-COUGH —DR P F FEDOROFF, of Arkhangelsk, states (*Proceedings of the Arkhangelsk Medical Society*, part 2, 1887, p 92) that he has obtained good results in whooping-cough by the internal use of the following mixture —℞ Morphin muriatic gr ij; apomorphin muriatic gr j, acid muriatic ℥ss, aq destill ℥viij, M D S, a tablespoonful four times a day The paroxysms are lessened both in number and frequency after the first few doses of the mixture —*The British Medical Journal*, July 9, 1887

THE
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PUBLISHED WEEKLY .

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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LARYNGEAL SYMPTOMS FROM PRESSURE

In a lecture on "Some Points in Relation to the Diagnostic Significance and Therapeutic Indications of Laryngeal Symptoms resulting from Pressure of Aneurisms upon the Vagus and Recurrent Laryngeal Nerves," DR DAVID NEWMAN endeavors to show by reference to cases of aortic and innominate aneurism 1 That aneurism of aorta and innominate artery may exist and give rise to laryngeal symptoms only, but in most cases, on careful physical examination, certain collateral signs may be made out sufficient to warrant one in forming a positive diagnosis, or to give rise to a very strong suspicion of intra thoracic tumor 2 That in the early stage pressure may cause symptoms of most urgent dyspnœa, accompanied by laryngeal stridor and paroxysmal cough 3 That at a later stage paralysis occurs, usually, but not always, limited to one side, characterized by phonative waste of breath and imperfect cough, but without dyspnœa, except when reflex spasm is indicated on the opposite side, or when pressure stenosis is caused by the aneurism 4 That in certain cases tracheotomy should be performed, not only to prevent impending death from dyspnœa, but also as a remedial measure

Dr Newman gives the records of three cases which illustrate his points, and from which deductions have been drawn The first was one of aneurism of the innominate artery and descending aorta, with paroxysmal dyspnœa from unilateral spasm of right vocal cord, followed three months after by bilateral spasm of adductors, and at a more remote date by bilateral paralysis of adductors In this case the paroxysms closely resembled an attack of laryngismus stridulus, as seen in children There was slight bulging of the sternal end of the clavicle, and evidences of hypertrophy of the left ventricle, but no pulsation over the small area of dulness, situated immediately to the right of the sternum and between the clavicle and second rib The patient had come for treatment on account of paroxysmal difficulty in breathing and a harsh dry cough, the voice being practically unimpaired except during the paroxysms Examination showed the larynx to be healthy, but if the mirror was held in position for even a short time the right vocal cord would be drawn across the middle line and fixed there, and immediately thereafter the patient would have a paroxysm of dyspnœa On postmortem examination the right recurrent laryngeal nerve was found to be completely obliterated In a second case the only symptoms supporting the diagnosis of aneurism were dysphonia, from pressure on the left recurrent laryngeal nerve, and a difference in strength and rhythm of the radial pulses A short time after this there was a development of paroxysmal tracheal dyspnœa, partial suppression of respiration, murmur on the left side, and detection of dull areas along the course of the ascending and descending aorta Laryngoscopic examination showed that the left vocal cord remained stationary in the cadaveric position during attempted phonation, and the apex of the arytenoid cartilage was drawn so far forward that the posterior third of the left vocal cord was not visible The patient had had syphilis, and improved under iodide of potassium

In the third case the patient had occasionally had considerable difficulty in breathing and a severe cough, without expectoration, during the intervals between the attacks of dyspnœa the voice was unaltered Examination of the larynx showed that the cords were completely approximated during phonation, but that the left cord did not respond so actively as the right At this time nothing abnormal could be discovered about the chest except slight hypertrophy of the left ventricle Six months later, however, the physical signs were fully sufficient for a diagnosis The fourth patient only complained of loss of voice In a short time there was dyspnœa on exertion The left vocal cord was found to remain in the cadaveric position during attempted phonation, but on direct pressure with a probe to the left of the arytenoid cartilage the cord moved freely The other symptoms were only sufficient for a suspicion of aneurism, but were more decided four months later

It is well known that death occurs, in cases of aortic aneurism, as a direct result of laryngeal suffocation What is the cause of these attacks of dyspnœa? Reid pointed out many years ago that "severe

dyspnœa, amounting to suffocation, may arise both from irritation and compression of the inferior laryngeal nerves or the trunks of the pneumogastrics For when both, or even one, recurrent nerve was irritated, the arytenoid cartilages were approximated, so as in some cases to shut completely the superior aperture of the glottis," and he explained how paralysis of this nerve, occasioned by compression or other cause, should produce this effect by arresting all the move ments of the muscles of the glottis It has been shown, by Rosenthal, Rutherford, Waller and Prevost, that if the superior laryngeal nerve be divided, and its central end stimulated, bilateral spasm of the glottis will result, the impression is conveyed by the superior laryngeal to the central nerve nuclei, and is thence reflected through the efferent nerves (recurrents) to the muscles on both sides and it is easily understood why pressure on the superior laryngeal or on the trunk of the vagus may reflexly cause bilateral spasm or bilateral paralysis But when the recurrent nerve alone is stimulated, the results are different "A stimulus acting on the efferent fibres generally causes unilateral adduction or abduction of the vocal cord " Pressure on one recurrent nerve is not likely to lead to serious dyspnœa, but pressure on the vagus, by causing spasm of the adductors on both sides, or paralysis on one side and spasm on the other, frequently leads to serious and sometimes fatal laryngeal obstruction

Is the obstruction to respiration due to interference with the function of the larynx, or to diminution in the lumen of the larger air tubes? How can we determine when the dyspnœa is due to abductor paralysis, and when to adductor spasm? The first question is important in connection with contemplated tracheotomy If the dyspnœa be due to laryngeal obstruction tracheotomy will relieve it, otherwise the operation is useless Laryngoscopic examination, therefore, is of very great importance, as without it a needless tracheotomy may be performed As to the value of tracheotomy in suitable cases, it must be apparent that the paroxysms of dyspnœa act hurtfully on the aneurism by causing strain on the walls of the sac, and they are also an immediate danger to life Tracheotomy will therefore permit of rest, and it will obviate the danger of death from asphyxia or rupture of the sac during a paroxysm It may be that the operation will only give temporary relief—but the patient is entitled to the chance

Space does not permit a more extended notice of this valuable paper It may be found in the *British Medical Journal* of July 2

THE AUTOBIOGRAPHY OF DR GROSS

From the press of George Barrie, Esq , of Philadelphia, has just been issued the Autobiograpy of Dr Samuel D Gross, in two elegant octavo volumes, of more than 400 pages each, edited by his sons, Dr Samuel W Gross and A Haller Gross, Esq "It is my wish," the author says in explanation of the writing of an autobiography, "to write a sketch of my life for the gratification of my children and grandchildren, and for the benefit of such members of my profession as may feel an interest in me from my long connection with it " And certainly there can be but little doubt that much good will grow out of this labor to those who read the life's record of the great master of surgery The ambition that can not be stimulated by it must be small indeed Like most men who have made their mark in the world, and one that time cannot efface, Dr Gross began his professional career as a poor man, and with no one to push him into fortune and fame What he did for himself is, in a general way, already known, and what we knew before only added zest to the reading of this book And besides this, there is a charm in reading of the great men of the profession of fifty years ago, sketches made by the man who knew them well, and yet whose hand many of us have grasped

But there are many practical points, and many wise suggestions in the works to which we wish to call attention One of these is that "the voice of the stomach should not be disregarded in eating and drinking As a general rule, whatever the stomach craves may be accepted as an indication as to what is wholesome Some physicians seem to be incapable of interpreting nature, no matter how loudly or energetically she makes her demands" It will be remembered that some years ago Dr Gross published a paper on the "Cravings of Nature" in the *American Practitioner*, and many would do well to read it Apropos of recent attempts to create interest in the subject of a National Bureau of Health, it is now almost thirteen years since, at a meeting of the American Public Health Association in Philadelphia, Dr Gross warmly advocated the necessity of such a Bureau, to be located in Washington, with a branch at the seat of government of each State and Territory "We have," he said, a "minister of war and a minister of the Navy to keep the country in a condition to meet any foreign bloodhounds that may threaten our liberties and deprive us of our territory Why then should there not be a minister of health to see to our sanitary affairs, to enable us the better to cope with the enemies that visit us in our

dwellings So long as we are without well organized government aid, so long will our people from the lowest to the highest pay the penalty of preventable disease "

Dr Gross took very great interest in the American Medical Association, and one of the last acts of his life was to write a paper for the Washington meeting in 1884 In his account of the meeting in Chicago ten years ago he has some remarks concerning the work of the Association, and the quoting of them may cause us to ask if the same may be said now—and may stimulate us to better things in the future "While the American Medical Association has done much good, it has by no means accomplished what it had promised to do, or what had been expected of it While the Transactions contain some excellent papers which would be creditable to a similar body of men anywhere, it contains many others which are entirely destitute of merit, and are disreputable as literary productions The annual addresses in medicine, surgery, midwifery, and hygiene are worse than useless, and are not what such an Association should listen to, covering, as they do, merely the advances made in these branches during the preceding year—a task which any youth of tolerable respectability in the profession could execute as well as any veteran " Fortunately we can say that since this was written many chairmen have departed from that beaten and profitless road, and have delivered addresses on special subjects, leaving the members to do their own research and reading in regard to the year's advances And if any of us deem the above criticism rather harsh, let us remember that it comes from one who was at all times a friend, who had the interests of the profession at heart, who did for his department of American medicine what no one else has done, and who, almost in the hour of death, said of the Association, "Give them my love "

Dr Gross' Autobiography may be obtained in Chicago of Mr W T Keener, 96 Washington street

UNSATISFACTORY MEDICAL APPOINTMENTS

At the recent annual meeting of the State Medical Society of West Virginia, the following preamble and resolution was adopted with much unanimity

WHEREAS, We are assured that in the recent appointment to the vacancy of the Board in the First District, the letter and spirit of the law were violated, and that the character of the appointment in other respects is not such as the profession have a right to expect, in consideration of the dignity and responsibilities of the office

Resolved, That the action of the Governor in making this appointment merits our unqualified disapproval, and that we most earnestly and respectfully call upon him to assist us, by his official acts, to maintain and uphold the law in its spirit and integrity

The law referred to is the Act creating a State Board of Health, and the action of the Governor of that State so " unqualifiedly disapproved," was the appointment of Geo J Garrison, M D , of Wheeling, to fill a vacancy on said State Board of Health If we are correctly informed, the said Dr Garrison had received a diploma only about one year previous from the Jefferson Medical College, of Philadelphia, and that after having attended but *one* regular annual course of lectures, although he had been in practice for several years The same appointment had been protested against by twenty nine of the physicians of Wheeling Such action on the part of the State Medical Society, and of a large majority of the regular members of the profession in Wheeling, is sufficient evidence that the Governor's appointment was not based on any superior professional education or special fitness on the part of the appointee, such as would enable him to discharge the important and responsible duties devolving upon the State Board of Health, in such a way as to command the confidence and respect of the profession and the people of the State It is the frequent recurrence of such mere political appointments to positions requiring high professional attainments and acknowledged ability, that causes so many in the medical profession to doubt the propriety of all legislation having for its object the control of medical education and practice If we are not mistaken it was this act of the Jefferson Medical College in conferring the degree of Doctor of Medicine on Dr Garrison after attendance upon only one annual college course of lectures, that caused the West Virginia State Board of Health to threaten to exclude that college from the list of colleges recognized in good standing And yet hardly twelve months passes before the same cheaply graduated doctor becomes a member of the same State Board of Health by the act of the Governor of the State, in defiance of the expressed wishes of the medical profession of the State

Such appointments, however, are no more reprehensible than the practice of conferring Degrees on *"Practitioners" after one course of college lectures*, that still seems to prevail in some medical colleges, not alone in the rude West or the *malarious* South, but directly in the Eastern metropolis, so called, of medical education and science

THE RELATION OF CONGENITAL MALFORMATION TO MENTAL WEAKNESS —In connection with a trial for

murder, the prisoner having hare lip and cleft palate, the following questions have been asked

Is congenital malformation usually or often accompanied by mental weakness?

Is the subject more liable to unsoundness of mind than other persons?

Can any special relation be made out between malformations of the head (such as the above) and mental weakness?

What is the proportion of such malformations among the insane and feeble minded?

Dr Praskovia N. Tarnovskaia reported at the first Congress of Russian Alienists at Moscow, that 84 per cent of the habitual prostitutes showed various signs of physical degeneration, such as irregularity in the shape of the skull, asymmetry of the face, anomalies of the hard palate, teeth, ears, etc

Any information, statistics, or reference to literature, which will throw any light on these questions will be gladly received at this office, and full credit will be given

ADVANCE REGISTRATION FOR THE CONGRESS — Under the head of International Medical Congress, in another column, will be found the form of *application* in blank, for members of the regular medical profession, in the United States, to *fill correctly* and send, or present in person, to the Chairman of the Committee on Registration, J M Toner, M D, 615 Louisiana Avenue, Washington, D C, with the membership fee, $10, and each person sending the application for registration in advance, by mail, should enclose a postage stamp to pay for return receipt or ticket of admission in return To save our readers the time and trouble of sending to Washington for the form of application, we will include an extra form in each copy of our next week's issue that can be detached for use

NINTH INTERNATIONAL MEDICAL CONGRESS, R R RATES —Let none of our readers, in any way interested in the International Medical Congress of Sept 5, 1887, omit reading carefully the official announcement concerning R R rates over the signature of the Chairman of the Transportation Committee on page 126 of THE JOURNAL for July 23 They will see that the reduced rates apply not only to *members*, but also to members of *their families* We wish to emphasize the fact, however, that all who wish to avail themselves of the reduced rates *must* apply to J W H Lovejoy, M D, No 900 12th St, Washington, D C, for just as many *Certificates* as they have *persons* intending to go Such applications had better be made without delay

SOCIETY PROCEEDINGS.

AMERICAN CLIMATOLOGICAL ASSOCIATION

(*Concluded from page 687, Vol VIII*)

EVENING SESSION

DR FRANK DONALDSON, of Baltimore, read a paper on

CAUSES OF CARDIAC FAILURE IN HIGH ALTITUDES

The important fact that there is often great dyspnœa and sudden cardiac failure on going to high altitudes has not been sufficiently emphasized Many patients are sent for general or special reasons to high altitudes and are thereby done great injury, especially if they suffer from any form of functional organic heart disease From some experiments with the pneumatic cabinet the author had come to the conclusion that this treatment should not be employed in cases in which there is any valvular disease of the heart or fatty degeneration of its walls Before being subjected to treatment in the cabinet an examination of the heart should always be made It has been asserted that the cause of the cardiac failure in ascending to high altitudes is want of oxygen The speaker had performed certain experiments with reference to this point At altitudes within 10,000 feet there is sufficient oxygen to supply the hæmoglobin In ascending to high altitudes the pressure of the air within and without the lungs is the same, but on the heart the action is different The pressure is removed from the outer surface of the heart, while the internal blood pressure remains the same There consequently must be dilatation of the heart walls This, in the speaker's opinion, was the cause of the heart failure under these circumstances

DR B F WESTBROOK, of Brooklyn, thought that the explanation of the author with reference to the effect of high altitudes on the heart is correct, but in the pneumatic cabinet the conditions are different Where the patient inhales compressed air or sits in a rarefied atmosphere and inhales air at the ordinary pressure, there is an absolute or relative increase of pressure within the thorax The heart is therefore submitted to a relatively increased pressure As a matter of practical experience, patients with mitral stenosis or mitral regurgitation with pulmonary congestion can be put in the cabinet with safety He would hesitate very much before putting a patient with aortic regurgitation into the pneumatic cabinet In mitral disease, however, the tendency is to assist rather than exhaust the diseased heart

DR S SOLIS-COHEN, of Philadelphia, said that when the individual goes into a rarefied atmosphere there is a disturbance of the relationship between external and internal pressure, and this disturbance will necessarily bring upon the patient disease The inhalation of compressed air in cases of dilated heart has been recommended by Waldenburg and others He had recently employed this measure with beneficial results in alleviating the dyspnœa and defective circulation due to a dilated heart

Dr James T Whittaker, of Cincinnati, said that the condition met with in a rarefied atmosphere cannot be compared with that met with in the pneumatic cabinet It does not seem possible to exert any mechanical pressure upon the heart in the cabinet The conditions which have been observed admit of easier explanation by a study of the effects on the surface vessels When the pressure is removed from the superficial vessels, the dilated heart propels the blood easier than before This is one of the most efficacious means of treating irregular heart He had used the cabinet for two years and had seen no ill effects from its use

Dr F C Shattuck, of Boston, read a paper on

SOME HOSPITAL CASES OF PHTHISIS, MARKED IMPROVEMENT UNDER GENERAL TREATMENT WITH SPECIAL REFERENCE TO ALIMENTATION

Many of the patients had been exposed to unfavorable hygienic surroundings The treatment employed was devoted largely to improvement of the general condition Search had been made for a specific treatment If the disease is of a parasitic nature it is natural to suppose that such a treatment would be of avail At present no such method of treatment is known There are few individuals to whose lungs, at one time or another, the bacillus does not gain access The fact that certain individuals are affected while others escape, forces us to believe that there is a predisposition to the disease The treatment employed by the author had consisted in relieving symptoms, improving the digestion, and the administration of as much food as the patient could take in the natural way Artificial feeding was not resorted to, but the patient was fed six or seven times a day From two to ten raw eggs with milk were given daily to each patient Alcoholic stimulants were not administered to the patients as a routine treatment, but were used only temporarily for special purposes He had for several years been systematically cutting down the quantity of alcohol used in chronic cases, and had seen no reason to regret it His experience had been that alcohol was not used with sufficient discrimination in chronic cases of disease Beef, milk, eggs, and other nourishing articles are more expensive than alcohol, but, if they can be consumed in sufficient quantity, they are more useful In 1883 the amount expended per patient for alcoholic liquors had been $2 70, while in 1886 it had been only 34 cents The patients received no injury even if they were not benefited by this reduction Eight cases of well marked phthisis were reported in which a decided gain in weight and general improvement resulted from the employment of the plan of treatment above described About sixty cases had been under treatment

Dr E T Bruen, of Philadelphia, read a paper on

GASEOUS ENEMATA

Of the therapeutic measures under the control of the profession, diet, climate and suitable hygiene are of principal importance It is possible by climatic and dietetic treatment to so change the nature of the tissues that they shall not be suitable culture media for the growth of the bacillus of tuberculosis I wish, however, to refer more particularly to the use of the Bergeon method by the injection of sulphuretted hydrogen To antagonize the specific cause of the disease, this method has been a failure so far as my experience goes Since February last I have had under treatment sixty one cases by this method Systematic examinations of the sputa have been made by Dr E O Shakespeare There has been no apparent reduction in the number or change in the character of the bacillus This method should be classed among the methods at our disposal for the treatment of this disease The good effects in my hands have been reduction of temperature, reduction of expectoration, very often a complete suppression of bronchial catarrh, and relief of cough This leads to improved digestion and enables the dietetic treatment to be carried out with great thoroughness Forty four of these cases showed improvement to a certain extent, the average gain in flesh being about five pounds In one half of the cases the temperature has been brought to the normal, while in the remainder, although the temperature has not been brought to normal, it has been reduced two or three degrees In fifteen cases the results have been negative, but in no case did any harm follow the use of this plan of treatment The improvement has been most marked where there is a considerable catarrhal element Those cases in which there has been more or less thickening of the lung, with the general symptoms well marked, wasting, loss of flesh and weight without much rise of temperature, I have found not specially benefited by the injection of gas I have had the opportunity of making a post-mortem in one case which had been subjected to this treatment Although the cavities in the lungs were unusually clean, I did not observe any evidences of cicatrization With reference to the strength of the solution, I have not found strong solutions at all satisfactory The best results have been obtained from a solution of 5 grains of sulphide of sodium with 5 grains of chloride of sodium in 1½ pint of water I have never found it desirable to administer more than 1½ gallon of gas at one time I insisted that the injection be made slowly and that one half to three quarters of an hour should be occupied I have not derived as much satisfaction, in the treatment of the various forms of phthisis to which I have referred, from any method as I have from the injection of sulphuretted hydrogen I have always tested the breath for the presence of sulphuretted hydrogen I have had negative results in at least eight out of every ten cases

Dr S Solis Cohen said that the experience of Dr J Solis Cohen and himself differed in some respects from that of Dr Bruen They had obtained the most decided benefit from strongly impregnated waters The best results were obtained in those cases in which the patient had a decided taste of sulphuretted hydrogen which continued for two or three hours after injection The best effect has been obtained in those cases in which suppuration is about beginning In about 50 per cent of the cases the condition has been greatly ameliorated In another 25 per cent there was slighter amelioration, while in

the remaining 25 per cent there was more or less benefit to certain symptoms He had seen no case in which no results were obtained

DR JAMES T WHITTAKER had for a month used sulphuretted hydrogen by inhalation, having previously employed it for a month by injection He puts the patients in the cabinet and allows them to have all the gas they will take It has produced no unpleasant results in any case The effects obtained have been about the same as those resulting from injection In about one third of the cases there were no results In searching the literature for records of bad results following the use of sulphuretted hydrogen, he found only ten in which a fatal result followed

DR ROLAND G CURTIN, of Philadelphia, stated that it had been recommended by Dr C Wood that the sulphuretted hydrogen be taken by the stomach, using a saturated solution through which carbonic acid has been passed He had tried this in four or five cases, and had had the same effects as from injection

DR F C SHATTUCK had used the sulphuretted hydrogen gas, and in several patients it produced collapse in varying degrees, with weak pulse, nausea, vomiting and headache In several other cases, although the treatment was well tolerated, it produced no good effect In one case of asthma with chronic bronchitis and emphysema thirty four injections of the gas were given While the treatment did not disturb the patient, it did no good With the use of the gas was combined the administration of iodide of potassium and other remedies, and the patient recovered in about the same time as on a previous occasion when the latter remedies were given and no gas used

DR B F WESTBROOK, of Brooklyn, read a paper on

THE LOCAL TREATMENT OF DISEASES OF THE RESPIRATORY ORGANS

The methods of treatment which had been employed were the direct introduction of coarse sprays, the use of the Evans inhaler and the use of the pneumatic cabinet In the treatment of phthisis the best results are attained in the early stages of the disease, or where the disease, although further advanced, is limited to a small portion of the lung The use of sprays is beneficial only in so far as we desire to treat the coexistent bronchitis or cavities connected with bronchi of the second or third order In incipient phthisis with very little bronchial catarrh, local treatment is probably of little service These cases are best treated with compressed air In a large proportion of the cases we may hope to render the disease latent The expansion of the lung favors the expectoration of the contents of the smaller tubes and modifies the intra thoracic circulation The sittings should be frequent—every day or every second day Ten minutes is usually sufficiently long for the patient to remain in the cabinet The pressure should gradually be increased up to one half or three fourths of an inch If used cautiously this is the best method for the local treatment of incipient phthisis With the Evans inhaler his results had also been satisfactory

In the treatment of advanced cases the first effort must be to cure or diminish the bronchitis The pneumatic treatment then comes into play This gives better expansion, improves the circulation and alters the action of the trophic nerves In all cases internal medication has been combined with the local treatment The more acute the disease, the higher the fever and the more sudden the onset, the less can we expect to accomplish by treatment In no case diagnosed as acute phthisis did treatment have the slightest effect

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WEDNESDAY, JUNE 1—SECOND DAY

DR A Y P GARNETT, of Washington, read a paper entitled,

OBSERVATIONS UPON THE SANITARY ADVANTAGES OF TIDE WATER, VA, INCLUDING VIRGINIA BEACH, AS A WINTER HEALTH RESORT

While no official records of the causes of death in this locality have been kept, the traditions of the inhabitants during the past hundred years and the observation of intelligent practitioners practicing in this region, go to show that consumption is very rare In other respects this locality is remarkably healthy The average number of deaths per thousand from all causes during the past six years has been 10 66 The average death rate in other sections of the State is 12 per thousand The author was disposed to attribute some of the benefits which this locality presents to the proximity of the Great Dismal Swamp which has an area of thirty by ten miles covered with cypress and evergreen trees At Virginia Beach the forest comes down close to the sea The atmosphere is remarkably dry, and salt exposed during the day shows no tendency to absorb moisture The average temperature during the winter months is considerably higher than other places along the coast As compared with Atlantic City, we have the following figures

	Virginia Beach	Atlantic City
January, - -	34 6°	30°
February, -	39°	29°
March, - -	45°	39°

DR A L LOOMIS, of New York, read a paper on

EVERGREEN FORESTS AS A THERAPEUTIC AGENT IN PULMONARY PHTHISIS

It has long been known that similar climates as determined by geographical and meteorological conditions have different therapeutic effects That there is some relation between the development of organisms and atmospheric conditions is becoming more and more apparent We know that cold and high altitude render the air aseptic, but the degree of cold and the height required is so great that clinically it is not possible to derive much advantage from this fact The effect of a purely aseptic air upon ulcerative processes is not so great as the effect of an atmosphere which is aseptic on account of the presence of antiseptic agents The belief in the good effect of pine forests in cases of phthisis is quite unanimous and the author thought that the clinical evidence in

favor of their beneficial influence in these cases was unquestioned The atmosphere in such regions is not only aseptic but also antiseptic Such an atmosphere contains considerable turpentine vapor and we should therefore expect it to contain a certain amount of peroxide of hydrogen It was the speaker's opinion that the majority of cases of phthisis die, not directly from the lesions of the lung, but from the secondary septicæmia and pyæmia which is set up It is impossible to apply to the ulcerations within the lung the antiseptic washing and dressing that is employed in external lesions, but if an antiseptic atmosphere can be obtained we may hope to counteract the secondary poisoning Such an atmosphere will not destroy the bacilli, but it will accomplish much in the way of arresting the suppurative process It was the opinion of the speaker that the atmosphere in the region of evergreen forests acts in a manner similar to the antiseptic agents which are successfully used to arrest suppurative processes in other portions of the body, and he thought in all probability the active agent was the peroxide of hydrogen resulting from the oxidation of the turpentine vapor While it is not possible for every one suffering with pulmonary phthisis to go to an antiseptic atmosphere it is possible to render the air of any particular locality antiseptic The evergreen forests should be preserved and evergreen trees should be planted in the neighborhood of our houses

Dr S Solis Cohen stated that he had had excellent results in the way of alleviation of symptoms in phthisis by the inhalation of terebinthinate substances, especially where this has been associated with the inhalation of peroxide of hydrogen or oxygen Under these inhalations he had seen laryngeal ulcers cicatrice, especially if they have been previously washed with the solution of peroxide of hydrogen

Dr W C Van Bibber, of Baltimore, read a paper on *The Climate of the Sub-Peninsular Pinellas, Florida*

Dr E L Trudeau, of Saranac Lake, N Y, read a paper on

ENVIRONMENT IN ITS RELATION TO THE PROGRESS OF BACTERIAL INVASION OF TUBERCULOSIS

Environment evidently has an important bearing in reference to bacterial invasion The author proposed to himself the following questions 1 What results ensue when bacillar invasion and unhygienic conditions are made to co exist? 2 Are unhygienic surroundings sufficient to cause phthisis when precautions are taken to exclude the bacillus? 3 Is bacterial infection always productive of tuberculosis when the animal is placed under the most favorable hygienic conditions? In order to answer these questions the following experiments were performed Fifteen healthy rabbits were taken and divided into three sets of five each The first experiment consisted in taking five of the rabbits, inoculating each with a pure culture of the tubercle bacillus and subjecting them to overcrowding in a dark cellar with poor and insufficient food and other unhygienic conditions In the second experiment five rabbits were placed in a box and lowered into a pit dug in the ground, the mouth of the pit covered with earth with the exception of a trap door for the introduction of food, which consisted of one small potato for each animal per day So damp was the air that the box in which the animals were confined was constantly wet The third set of animals were inoculated with the tubercle bacillus and turned loose on a small island where they had abundant sunlight, fresh air and exercise They were daily supplied with wholesome food

The results of the experiments were that four of the first five rabbits died in three months and extensive tuberculosis found The fifth animal was killed at the end of five months and the same condition found The second set of rabbits were all living at the end of four months They seemed to be as active as at the time the experiment began They were then killed and careful examination showed nothing abnormal One of the third series of rabbits died at the end of one month and on examination there was enlargement of the cervical and bronchial glands and tubercles in the spleen The remaining rabbits continued in apparently good health and were killed at the end of four months They were loaded with adipose tissue, the flesh was firm and red, all the organs were normal and even the seat of the punctures could not be made out These experiments confirm the theory that the production of tuberculosis is a most complex process Although the environment may bear but the relation of a predisposing cause to the microbe invasion, it is nevertheless a most potent factor in determining the future and final results of the disease, and while we may not underestimate the pathogenic properties of the bacillus, the effect of environment upon the vitality, is a factor which must not be ignored

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AFTERNOON SESSION

Dr A C Peale, of the U S Geological Survey, Washington, presented a *Classification of American Mineral Waters*

Dr F F Smith, of St Augustine, Fla, read a paper on

ST AUGUSTINE, FLA, AS A WINTER HEALTH RESORT

He described the geographical and climatic conditions existing in St Augustine An abundance of pure water is obtained from sixty artesian wells This water is charged with sulphuretted hydrogen Drinking water is obtained by means of cisterns A complete system of sewers is now being introduced These will be flushed by the waste water from the artesian wells The average temperature during the winter months of the past ten years has been as follows November, 63°, December, 57, January, 55°, February, 58°, March, 61°, April, 67° The average number of rainy days during the winter months for the past ten years has been 33, but on 19 of these occasions the rainfall was at night so that there was really only *14 rainy days*

The following papers were read by title

An Invalid's Day in Colorado Springs, by Dr S E Solly, Colorado Springs, *The Climate of Southern California*, by Dr H S Orme, Los Angeles, Cal,

Pas Christian, Mississippi, as a Health Resort, by Dr Chas LeRoux, Pas Christian

The report of the Committee on the Congress of American Physicians and Surgeons was received and adopted Dr A L Loomis, of New York, (with Dr F Donaldson, Sr, of Baltimore, as alternate) was appointed as the representative of the Association to the Committee on the Congress

OFFICERS FOR THE ENSUING YEAR

President —Dr A L Loomis, New York

Vice-Presidents —Drs A P Y Garnett, Washington, and James T Whittaker, Cincinnati

Sec'y and Treas —Dr James B Walker, Philadelphia

Council —Drs E T Bruen, Phila , J H Tyndale, New York, F H Bosworth, New York, F C Shattuck, Boston, and R G Curtin, Phila

The Association then adjourned

FOREIGN CORRESPONDENCE

LETTER FROM GOETTINGEN [1]

Surgical Tuberculosis — Tuberculosis of Ribs, of Knee, of Elbow—Resection of Hip—Koenig's Success with Tuberculosis—Iodoform—Carcinoma of the Rectum—The Germ of Erysipelatoid of the Fingers —Merkel

Professor Koenig spent a whole forenoon in showing the most interesting cases of surgical tuberculosis and in describing the different affections and explaining their treatment A number of cases of tuberculosis of the ribs were shown, among them one where nearly an entire rib had been removed When tuberculosis selects a rib, and this is rather a frequent point of localization, it appears usually as a central lesion primarily extending by continuity along the central cancellated tissue and towards one or both surfaces of the ribs, where the periosteum is destroyed and the disease extends to the contiguous soft tissues, giving rise to diffuse abscess in the external wall of the chest, where it extends in a superficial direction, and to the formation of peri pleuritic abscess, when the process travels in the direction of the pleura If such abscess have opened spontaneously or have been incised extensive and sinuous fistulous tracts are formed, which frequently renders the detection of diseased bone, by probing, difficult or impossible Treatment by simple scraping seldom leads to a permanent cure, as it is almost impossible to reach all of the diseased tissue with a spoon The only treatment which can be relied upon is to expose the rib freely by an incision and to follow the disease until healthy bone is found and then to excise the entire thickness of the rib Abscess cavities and fistulous tracts must be laid open freely and thoroughly scraped A case was shown where the fourth rib in a young woman was the seat of the disease, and where numerous fistulous tracts lead underneath the mamma where, in order to expose the diseased rib freely, the entire breast was loosened from its attachments to the chest and reflected, after the removal of the diseased tissues it was replaced and fixed with sutures The case is now progressing favorably

An exceedingly interesting pathological condition in tubercular joints was described and illustrated by specimens and drawings on the blackboard It related to cases in which the tubercular process is primarily located near an articular cartilage, and where at a corresponding point in the joint a plastic exudation takes place, and which, after it has become fully organized, protects the remaining portion of the joint against infection, as for an indefinite period of time and perhaps permanently this plastic wall limits the extension of the disease It is a spontaneous effort towards retardation of the process, and may even result in a permanent cure

In children suffering from tuberculosis of the knee joint Koenig resorts to arthrectomy and careful removal of tubercular foci from the articular extremities with the sharp spoon In adults he prefers typical excision He showed two female patients, aged respectively 63 and 65 years, to prove that old age is no contraindication to excision of tubercular joints Both patients were suffering at the same time from pulmonary tuberculosis One of them had undergone excision of a tubercular knee-joint five weeks previously, and the wound had nearly healed under two dressings without suppuration, at the same time the general health had materially improved The second case was one of tuberculosis of elbow joint, followed by the formation of an immense articular abscess in a greatly emaciated phthisical woman, where the object of the operation was more for alleviation than cure, but where, against all expectations the wound healed in a remarkably short time without the formation of a drop of pus Although in this case the general condition did not improve, the increased comfort has more than compensated the patient for the risk she assumed It is difficult to conceive of anything more satisfactory than the prompt healing of such immense wounds under such unfavorable local and general conditions I doubt if any one but Koenig can show such results After excision of the elbow joint he does not resort to passive motion until five weeks after the operation, when the forearm is flexed at right angles with the arm, and in this position is immobilized for another week or two, after which time regular passive motion is made

In excising the hip joint he makes a long straight incision over the centre of the greater trochanter down to the bone, after the joint has been reached the upper rim of the acetabulum is always removed with a chisel, so as to afford better access to the joint With a chisel the trochanter is divided into three parts in the line of the axis of the bone, the central portion is the thickest, and its upper portion is cut off so as to secure direct drainage of the joint after the lateral portions have been replaced and retained with a few sutures Through such an opening the head and neck of the bone can be readily removed, and the acetabulum becomes accessible

[1] By permission of Drs Fenger and Senn

for operative procedure should the local conditions warrant such a step, while through the defect in the great trochanter efficient drainage could be established The whole after-treatment consists in rest in bed with extension by weight and pulley in abducted position for five weeks After this time the patient is allowed to walk on crutches and extension is applied only during night for at least a year

Since I have seen the numerous patients in Koenig's klinik, where a few weeks after the operations the wounds were either entirely healed or only a superficial granulation surface remained, I have become convinced that the numerous failures in my own practice and the practice of other surgeons were due to imperfect removal of diseased tissues, especially in the acetabulum and the capsule Koenig attacks these structures boldly and fearlessly with his chisels and large spoons, and does not close the wound unless he has satisfied himself that the object of the operation, the removal of the granulation tissue, has been accomplished Other surgeons will do well to follow his example

That iodoform is used after these operations is unnecessary to mention, as Professor Koenig has not lost his faith in the anti bacillary effect of this drug You are undoubtedly aware that two of your countrymen have recently tried to prove that iodoform has no antiseptic properties whatever This is a strong claim, as it comes in conflict with the practical experience of thousands of surgeons who for several years have had unlimited faith in its antiseptic qualities, and have been pleased with the results The communication from Copenhagen caused quite a commotion among the German surgeons, as the claims were based on results obtained from experiments, and no one doubted the reliability or sincerity of its authors Numerous careful experiments were made in Berlin by de Ruyter, who presented the results of his investigations to the German Congress of Surgeons at their last meeting, wherein he showed to the satisfaction of all present that while iodoform may not prevent germ growth directly, it has a decided antiseptic action, as when it is brought in contact with ptomaines a chemical change takes place which destroys the toxic effects of the products of the germs In the discussion after the reading of this paper Professor Bruns said that iodoform possesses direct anti-bacillary properties, and in support of this assertion states that he had treated fifty-four cases of tubercular abscess by injecting a mixture of alcohol, glycerine and iodoform after evacuating the pus, and out of this number forty recovered As an additional proof of the anti tubercular effect of iodoform, he has observed by careful examination that a few weeks after an iodoform injection into a tubercular abscess, the bacilli had completely disappeared Volkmann expressed himself as perfectly satisfied with iodoform, and said that in the face of such uniform favorable results we had no right to abandon it as an antiseptic

I have had an opportunity to satisfy myself, in the private laboratory of Professor Socin of Basle, which is in charge of Dr Garrè, his private assistant, that something must have been wrong in the Copenhagen experiments Dr Garrè showed me a number of gelatin plates which had been exposed to an iodoform spray and subsequently inoculated with different pus microbes, and which remained perfectly sterile Dr Garrè attributed the antiseptic quality of iodoform entirely to the iodine which it contains, and consequently places great stress on using a reliable preparation, carefully kept in a dark place

Prof Koenig has had an extensive experience with cases of carcinoma of the rectum, and has come to the conclusion that when the disease has extended high up it is better not to resort to desperate measures with a view to its removal, but prefers now, in such cases, to make an inguinal colotomy by dividing the bowel completely, emptying and closing the distal end and stitching the proximal end into the wound. This operation affords great relief, prolongs life, and is preferable to the more doubtful results obtainable by extirpation of a high rectal cancer I believe Koenig only echoes the sentiments of all prudent and conscientious surgeons on this subject There is a limit to radical measures in this as well as in malignant affections of other organs

Professor Rosenbach has finally succeeded, after a long and patient search, in demonstrating the germ of a rather frequent but heretofore obscure lesion, *erysipelatoid of the fingers* This disease is a specific dermatitis and always results from inoculation Butchers, cooks, in fact persons handling game, are most frequently affected by it The appearances of the skin resemble true erysipelas, but the affection remains circumscribed, never gives rise to constitutional symptoms, and disappears spontaneously after two to four weeks The germ, which is invariably present, belongs to the class of algæ, grows readily upon gelatine culture, and when inoculated always produces the same disease

One of the evenings in Gottingen I spent at the house of Professor Rosenbach, where I met Professor Merkel, the anatomist, and the house staff of the surgical clinic A superb dinner was served, and although our host does not enjoy the weed, he had made special provision for this occasion, and the best brands of imported cigars were freely distributed during the evening I visited Professor Merkel the next morning at the Theatrum Anatomicum and examined the splendid collection of skulls, Langenbeck's beautiful dissections of vessels and nerves, and the beautiful specimens of injected lymphatics made by Teichmann for his classical work on the "Anatomy of the Lymphatics " The table in the lecture-room is the same as was used by my distinguished countryman, Haller It is made of oak wood, and although not as convenient as the dissecting tables of more modern construction, it answers every purpose, and it is to be hoped that it will serve the same useful purpose for many generations yet to come The sight of such a venerable structure brings up many memories of the past, as a number of the greatest anatomists have stood at its head, and many of the most distinguished men who have gathered around it for several centuries have here laid the foundation for their successful career Professor Merkel is a son in law and successor of the famous anatomist Henle, and is a

worthy follower of the long line of distinguished anatomists who have preceded him He is now writing an extensive work on surgical anatomy which presents certain features which are destined to make it the most useful text book on this subject

The crowning point of my visit to this old seat of learning was a dinner given by Professor Koenig in one of the apartments of the hospital shortly before my departure, to which Professor Rosenbach and the house surgeons were invited Toasts were drank, views exchanged until the cruel town clock reminded us that the hour for leaving had arrived I parted from the band with a distinct promise that we should meet again "in the land of the free and the home of the brave" Very sincerely yours, N SENN

DOMESTIC CORRESPONDENCE

THE METRIC SYSTEM

Dear Sir —On May 8, 1872, it was resolved in the Section on Materia Medica and Chemistry "that the inclusion of the decigram and of the cubic centimetre in the list of officinal weights and measures is considered as desirable, and tending to the advance of medical science" On May 5, 1875, the American Medical Association adopted a resolution offered by Dr Seguin, to appoint delegates to advocate in Europe the unity of clinical observation—to invite European societies to concert a plan of *uniformity* of *methods, instruments, scales, and records of clinical observation* The plan embraced the unity of clinical thermometers, thermometric scales, charts, etc, a uniform graduation of the sphygmograph, myograph, spyrograph, æthesiometer, dynamometer, globulimeter, ophthalmoscope, thermoscope and other instruments of precision used in diagnosis, etc On June 7, 1876, Dr Seguin, in his report, in the name of the commission appointed the year before, says This is not only a question of pride for the Association, it is one of justice to the American physicians at large"

On June 7, 1878, the following communication from the Medical Society of the State of Pennsylvania, was entered on the minutes of the Association

At the annual meeting of this body held in Pittsburgh, May, 1878, it was unanimously

Resolved, That the Medical Society of the State of Pennsylvania, recognizing the advantages of the metric system from its universality, simplicity, and scientific character, does recommend the use of the same to the members of the Society, and urges them to familiarize themselves with it, and to advise their students to use it exclusively when they commence their medical career

Resolved, That in all communications made to this Society in which reference is made to weights and measures, the metric system only should be used

Resolved, That the Secretary of this Society is instructed to bring this action to the notice of the American Medical Association at its next meeting, and urge upon that Association a similar action

At this same meeting of the Association, Drs Marion Sims, T M Drysdale and E Seguin were continued as commissioners and delegates to foreign medical organizations to *urge* the question of uniformity in medical observation, etc Two days before this the following was adopted by the Section on Medicine

Resolved, That this Section, recognizing the value of the metric system for its uniform, international, indestructible, generally applicable, convenient, simple, safe and scientific character, hereby recommends to all physicians the use of the same in their practice, and in their writings and teachings

At the annual meeting of the Association in 1879, the Association took the following action in regard to the matter

Resolved, That the American Medical Association adopts the International Metric System, and will use it in its Transactions

At the annual meeting in 1880 the Executive Metric Committee appointed in 1879, recommended (1) the teaching and practice of the metric system in Medical Colleges, Clinics, Dispensaries, etc, (2) that the Association charge its Executive Metric Committee with the duty to report annually on the above institutions which teach, and those which do not teach the metric system

These recommendations were adopted

The foregoing may seem to be ancient history, but it is sometimes useful to read such history in order to see what it has taught Three or four years ago there was a warm discussion on the metric system in the *Medical News*, in which the system was upheld and adversely criticised—but without one good argument being made against it And as yet no one has been able to discover one single fault in the system Of the civilized peoples of the world the English and Americans are the only ones who still adhere to grains, drachms, scruples and ounces For the present discussion it matters little whether the physician writes his prescription in scruples or portions of a ton, provided his chirography be so good that the druggist will not mistake his signs (and how many do write so clearly?) But what the readers of our literature demand, and what scientific accuracy demands, is that we shall use the metric system, that we shall no more read, and speak of in our writings, grains and ounces, inches and feet, Fahrenheit degrees, cubic inches and feet, or any other system of weights and measures than the metric The amount of medical literature that is literally poured into this country is enormous, and with the exception of some of that which comes from Great Britain and her colonies, every weight and measure is expressed in the metric system, save in a few provoking cases (which find their counterpart here) in which a tumor is said to be as large as a nut or a seed

It has been said that even if the metric system is used by "foreigners" the quantities should, in our literature, be translated into the drachms of our daddies And this is an example of the way such must be done, Lewin's sublimate injection for syphilis, is

Corrosive sublimate	0 24 or gr iiij 11
Distilled water	30 or ʒvij ½

Another solution (Rosenthal's) is

Corrosive sublimate	024 or gr 5 16
Glycerine (heated)	4 or ʒj
Water, q s ad	15 or ʒiij ℈ij

The English and American system seems to com

pare as favorably with the metric as the Chinese does with our grains and drachms The metric system is not "foreign", it is scientific, and science knows nothing of nationality Are we waiting for England? Why should we not take the lead? In fact England is already ahead of us in the use of the metric system

Suppose it is a linear measure If an instrument of precision be 2 cm long it must be translated 4 5 inch If the diameter of a tube be 3 mm we must say 03937 inch if we wish to be precise, and the matter becomes ridiculous when we translate the size of microscopic objects from micromillimetres to fractions of an inch—for there is just as much reason to translate micromillimetres as centimetres or kilometres

If a "foreign" writer speaks of one litre we must write 1 0565 quart in order to be exact, if cubic centimetres be the measure we must use fractions of cubic inches, or decimals

In recording thermometric measurements the inconvenience is not so great, as we can always easily do away with fractions by using decimals—yet we not infrequently see the fractions used The chief inconvenience is that in order to read temperature charts, in other languages, intelligently we must constantly bear in mind two separate scales The barometers used for accurate scientific measurement are graduated in millimetres, and there are no decimals as in case of those commonly used in this country

The truth concerning the neglect of the metric system in this country is that, in the first place it is not properly taught in schools, nor are decimals properly taught, in the second place, it is a little trouble to learn something new and strange, and our fathers got on pretty well with their system I will venture the assertion that there are not half a dozen good chemists in this country or any other who use the apothecary's weight in their work All books on examination of urine, etc, are written entirely in the metric system If there were no other reason for adopting the metric system, the fact that it is used by the large majority of medical and scientific men —and has been found by them to be uniform, generally applicable, convenient, simple, safe and scientific in character—would be alone sufficient

Very truly, WM G EGGLESTON

Chicago, July, 1887

INTERNATIONAL CONGRESS

SECTION OF DERMATOLOGY AND SYPHILOGRAPHY

The following list of papers proposed to be read in the Section of Dermatology and Syphilography of the International Medical Congress, comprises those received previous to July 1, 1887 A number of papers have been promised by prominent European writers but the titles have not yet been received

1 Lupus Lymphaticus, with drawings, by Mr Jonathan Hutchinson, London

2 Das Seborrhoische Ekzem, by Dr P G Unna, Hamburg

3 Hydroa and its relations to Pemphigus, Herpes, Dermatitis Herpetiformis (Duhring,) Impetigo Herpetiformis (Hebra), Herpes Gestationis, by Dr T Colcott Fox, London As an introduction to a general discussion of the subject

4 Treatment of Syphilis by injections of insoluble mercuric salts, by Dr H Watraszewski, Warsaw

5 La lepre observée à Constantinople, by Dr Zambaco, Constantinople

6 L'elephantiasis des Arabes chez les enfants, by Dr Moncorvo, Rio de Janeiro

7 A new method of treating diseases of the skin locally, by Dr Valentine Knaggs, London

8 Einige trophoneurotische Gefassaffectionen, by Prof E Schwimmer, Budapest

9 Sur le mycosis fongoide d 'Alibert Nouvelle communication clinique avec recherche de microorganismes, by Prof Tomasso de Amicis, Naples

10 Electrolysis in Dermatology, by Dr J N Bloom, Louisville

11 On the occurrence of Ulcers resulting from spontaneous Gangrene of the Skin, during the later stages of Syphilis, and their Relations to Syphilis, by Dr Herman Klotz, New York

12 Double Comedo —An Anatomicopathological study, by Dr A H Ohmann-Dumesnil, St Louis

13 Erythematous Lupus of the Hands, by Dr Ohmann Dumesnil

14 A new method of treating Favus and Herpes Tonsurans, by Dr H J Reynolds, Chicago

15 Area Celsi, by Dr A Ravogli, Cincinnati

16 Lupus Erythematosus, by Dr A Ravogli

17 A contribution to the Knowledge of Impetigo Herpetiformis (Hebra), by Dr Joseph Zeisler, Chicago

18 Rectal alimentation in diseases of the Skin, by Dr J V Shoemaker, Philadelphia

19 Vaccination during the incubation period of Variola, by Dr William Welch, Philadelphia

20 Studies in Hirsuties, by Dr G H Rohé, Baltimore

21 A unique case of progressive Melanosis of the Skin, with exhibition of subject, by A R Robinson, New York

22 The pathology and therapeutics of Alopecia Areata, by A R Robinson —As introduction to a general discussion of the subject

A R ROBINSON, President of Section

REGISTRATION BLANK

"The Congress will consist of such members of the regular medical profession as shall have registered and taken out their tickets of admission, and of such other scientific men as the Executive Committee of the Congress shall deem it desirable to admit" The fee has been fixed at ten dollars Each member of the Congress will be entitled to a copy of the Transactions —*Rules of the Executive Committee*

Those about to register will please read and give attention to the following directions to secure accuracy in the list of members of the Congress, and, to prevent mistakes therein, it is especially requested that all proper names of persons and places shall be

written distinctly and in full, and without abbreviations in any case (*For example* Instead of J W Taylor, Phila, Pa, it should be written John Warren Taylor, Philadelphia, Pennsylvania, etc, etc)

By order of COMMITTEE OF ARRANGEMENTS

Register No

FORM TO BE FILLED UP BY APPLICANT FOR MEMBERSHIP IN THE CONGRESS

Data Required

Name in full
Post-Office Address
If in a city, give also street and number
If in the country, give also name of the county
State
Province
Country
If a Delegate, state from what country or society
Practice general or special
If special, name the branch

CONCERNING A COMMEMORATIVE MEDAL

As former International Medical Congresses have been commemorated by suitable medals, it is proposed (should a sufficient number be subscribed for) to have one of good size and proper design struck for the IX Congress A medal with the head of George Washington on the one side and the seal adopted for the Congress on the other, would doubtless be appropriate The medal of the London Congress had the bust of the Queen on one side and the seal of the Congress on the obverse, and cost one guinea Such a medal, well executed in bronze, will cost us five dollars Those approving the project and desiring such a medal will deposit five dollars with the treasurer, who will give a receipt for the same, and deliver the medal in proper time, if struck

Blank form to be filled

Name in full
Post Office Address
Number of medals subscribed for

If from any cause the medals should not be struck, the money will be returned to subscribers

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THE INTERNATIONAL MEDICAL CONGRESS —We copy with full endorsement, the following from the July Number of the *Alienist and Neurologist* —[ED] Before another issue of this *Journal* shall have gone forth to its readers over the world, the Congress will have met in Washington, received the cordial fraternal welcome America's physicians are preparing for it, finished its scientific work for the year and cemented anew the bond of friendship and fraternity existing throughout the world among all true physicians

A few who invited the Congress may not be there to greet its members, but we hope they will

We hope the few individual declarations of this kind will be reconsidered and revoked At all events the Congress will be heartily received by the American profession as a body The army will be there to honor them, though a few deserters may be in the rear, and a few "wounded in spirit"

But by September we hope to see all the wounded restored to the ranks and all the deserters from the camp brought back, not in ambulance or chains and under guard, but cheerfully returning (led by silken cords of love, as it were,) to welcome to our common country our common friends, who have been invited to accept the hospitality of our common household

We will put our family jars in the closet where we keep our skeletons (if we have any on hand in September), and set our best viands on the table We will lock that closet and bury that key or throw it into the sea, and hang out the latchstrings to our hearts and homes, as Americans are wont to do when guests whom they esteem come to their doors

Americans know how to make up after a war as well as how to fight This the world knows We are not fighting over who shall run the Congress now but for funds to run it hospitably and creditably to the American good name for cordial hospitality

Send on your funds, gentlemen, belligerents, to the finance committee, and your swords shall be turned into knives and forks and something for them to work on, and you shall make plowshare furrows into the affections of our coming guests, and pruning hooks to cut off the asperities engendered by the incipient late lamented unpleasantness among ourselves

Everybody is going to the Congress, and everyone is going there in good humor too

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BRITISH MEMBERS OF THE CONGRESS —The following members with ladies will sail for America to attend the Congress

On the "Germanic" (10th August) will sail Mr and Mrs Th Halliburton, Dr and Mrs W D Halliburton, Misses M and T Halliburton, Dr and Mrs W H Woodruff, Dr and Mrs Grady Hewitt, Dr and Mrs C D F Phillips, Misses Phillips, Dr L Landolt

On the "Adriatic" (August 17) Dr and Mrs W Bowman Macleod

On the "Britannic" (August 24) Lennox Browne, Esq, London, G J Hutchinson, Esq, London, Dr Grant Bey, Cairo, W D Spanton, Esq, Hanley, Dr Boyd Joll, Liverpool, Dr Eddowes, Market Drayton, H Valentine Knaggs, Esq, London, Dr S Brown, Dr Foster McGeogh, Dr Parkinson, Comegys Leach, Dorset, Alfred Aplin, Esq, Nottingham, Dr Dolan, Halifax

These are but a few to sail by White Star Line I expect a large British contingent will attend

(Signed) T M DOLAN, M D

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U S ARMY, FROM JULY 16, 1887, TO JULY 22, 1887

By par 43, S O 162, A G O, July 15, so much of par 1, S O 156 c s, A G O, as directs Capt Jno de C W Gardiner, Asst Surgeon, U S Army, to report for duty at Ft Washakie, Wyo, is revoked

Capt R Barnett, Asst Surgeon, sick leave still further extended six months on account of sickness S O 162, A G O, July 15, 1887

By par 42, S O 162, A G O, July 15, so much of par 1, S O 156 c s, A G O, as relieves Capt Geo H Torney, Asst Surgeon, U S Army, from duty at Ft Monroe, Va, is revoked

Capt A W Taylor, Asst Surgeon, now at Ft Laramie, Wyo, is ordered for temporary duty at Ft Robinson, Neb S O 162, A G O, July 15, 1887

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDING JULY 23, 1887

Surgeon C S D Fessenden, granted leave of absence for thirty days on account of sickness July 18, 1887

P A Surgeon F W Mead, granted leave of absence for thirty days July 19, 1887

P A Surgeon H W Yemans, granted leave of absence for thirty days July 23, 1887

P A Surgeon S D Brooks, promoted and appointed P A Surgeon from July 1, 1887 July 21, 1887

Asst Surgeon J H White, to proceed to Washington, D C, as escort to an insane seaman July 18, 1887 Ordered to examination for promotion July 23, 1887

Asst Surgeon R B Watkins, leave extended fourteen days on account of sickness July 20, 1887

Asst Surgeon G M Magruder, to proceed to Galveston, Tex, for temporary duty July 21, 1887

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ADDRESSES

INTRODUCTION TO MEDICAL JURISPRUDENCE

Address delivered at the Thirty Eighth Annual Meeting of the American Medical Association, June 10, 1887

BY ISAAC N QUIMBY, M D,

OF JERSEY CITY, N J

CHAIRMAN OF THE SECTION ON MEDICAL JURISPRUDENCE

It is not a little remarkable that, while medical jurisprudence is but a new comer in the schools, and only one year ago received its first recognition as one of the legitimate subdivisions of the working scope of the American Medical Association, its origin may be traced to the very beginning of established governments Among the Hindoos as, subsequently, among the Israelites, Greeks and Romans, jurisprudence appears to have engaged the attention of lawgivers from the earliest period of which there is any record It is allied to and coordinate with medicine, but in the use of this comprehensive word medicine (preventive and curative), jurisprudence for the prevention of disease far antedates the use of remedies for curing it Measures for the protection of health, long before they were codified, were first devised and intelligently applied—it scarcely seems necessary to say in this presence—by priests, who, in the exercise of their functions, laid the foundation of medical jurisprudence by a sacerdotal jurisprudence which, in some things, has not been improved upon in the lapse of centuries

Far back in the history of mythology we learn that, while the Babylonians, Chaldeans and other ancient nations had no physicians, in the temples of Canopus and Vulcan, a skilled priesthood had systematic rules for the protection of the public health and regulating regimen To these regulations, in many particulars, a resemblance of the Mosaic ceremonial law is traceable, and finally, in the progress of knowledge, the Levitical code, comprehending regulations concerning food, ablutions and other purifications, the segregation of persons affected with contagious diseases, and the disposal of excreta, are given with such precision as to justify the designation of the Mosaic record, as the earliest code of jurisprudence for the protection of health of which we have any knowledge Herodotus gives a history of this code more in detail According to him the Egyptians had laws regulating marriages and the relation of the sexes, making distinctions in the nature of wounds, whether mortal, dangerous or otherwise, with reference to penalties, prescribing modes of embalming and burying the dead, and in many other respects comprehending a system of sanitary and criminal police scarcely less perfect than that which exists among enlightened communities at the present day

Among the Greeks, Hygeia, the Goddess of Health, was, in like manner, in the foreground of medicine. The Asclepiadæ or priest-physicians who worshipped at her shrine, at the first, wholly confined their advice to preventive medicine, dietetics and hygiene, and Hippocrates, their descendant, taught that

"Whoever wishes to investigate medicine properly should proceed, in the first place, to consider the seasons of the year, and what effects each of these produces (for they are not all alike, but differ much from themselves in regard to their changes) Then the winds, the hot and the cold, especially such as are common to all countries, and then such as are peculiar to each locality We must also consider the qualities of the waters, for as they differ from one another in taste and weight, so also do they differ much in their qualities In the same manner, when one comes into a city to which he is a stranger, he ought to consider its situation, how it lies as to the winds and the rising of the sun, for its influence is not the same whether it lies to the north or the south, to the rising or setting sun These things one ought to consider most attentively, and concerning the waters which the inhabitants use whether they be marshy and soft, or hard and running from elevated and rocky situations, and then if saltish and unfit for cooking, and the ground, whether it be naked and deficient in water or wood, or well watered, and whether it lies in a hollow, confined situation, or is elevated and cold, and the mode in which the inhabitants live, and what are their pursuits, whether they are fond of drinking and eating to excess, and given to indolence, or are fond of exercise and labor, and not given to excess in eating and drinking

"From these things he must proceed to investigate everything else For if one knows all these things well, or at least the greater part of them, he cannot miss knowing, when he comes into a strange city, either the diseases peculiar to the place, or the particular nature of common diseases, so that he will not be in doubt as to the treatment of the diseases, or commit mistakes, as is likely to be the case provided one had not previously considered these matters. And in particular as the season of the year advances, he can tell what epidemic diseases will attack the

city, either in summer or in winter, and what each individual will be in danger of experiencing from the change of regimen For, knowing the changes of the seasons, the risings and settings of the stars, how each of them takes place, he will be able to know beforehand what sort of a year is going to ensue Having made these investigations, and knowing beforehand the seasons, such a one must be acquainted with each particular, and must succeed in the preservation of health, and be by no means unsuccessful in the practice of his art And if it shall be thought that these things belong rather to meteorology, it will be admitted, on second thought, that astronomy contributes not a little, but a very great deal indeed, to medicine "[1]

He next proceeds with the consideration of details based upon the application of the essential knowledge for the successful practice of medicine foreshadowed in this quotation But no union of the principles of law on medicine followed the way so clearly opened by Hippocrates

Lycurgus, who lived eight centuries B C, and Pythagoras, three centuries later, both taught that medicine was a branch of legislation, but so little was known of medicine in Greece that those lawgivers attached no importance to it The sick were regarded as burthensome and efforts to heal them, except of such disabilities as were contracted in the service of the State, were regarded as detrimental to the public welfare And of children, only the strong and well formed were allowed to live, the weak or deformed were exposed to die on Mount Taygetus At the age of 7 years boys were taken from their parents and educated by and for the State, which subjected them to the severest discipline, hence the most robust only survived The laws of Lycurgus and his disciples were so thoroughly implanted on the mind of the State that, during several centuries, while the chief concern was to secure a robust population capable of bearing arms, the people were thoroughly imbued with the doctrine that the best way of perfecting the human species was the barbarous practice of abandoning delicate infants and rearing only those which proved capable of withstanding the severest hardships Even Plato, who had the benefit of the wisdom and philosophy of Hippocrates, taught that children with hereditary diseases should be left to chance for their future development How to provide for the health of cities and camps, appears to have been the full extent of their medical law, notwithstanding the advent of Hippocrates

In Rome, the earliest medical laws of which there is any explicit record were enacted during the reign of Numa Pompilius, contemporary with the laws of the Spartans originating with Lycurgus, to protect the life of an heir, by requiring medical assistance to be summoned in all cases of difficult labor, and forbidding the burial of a pregnant woman until the fœtus should first have been extracted There is no other record of importance until a dozen centuries later, during the reign of Justinian, in the early part of the sixth century of the Christian era, when the controlling influence of Greek philosophy and Greek medicine had become so pronounced that in the *Pandicts* or Codex Justinianeus, various titles are arranged as referring to crimes, physical deformities and questions of legitimacy, with instructions to the courts not to be guided by the judgment of living physicians, but to form their opinions exclusively *"upon the authority of the most learned Hippocrates"* And this in the face of the fact that an *archiater* or State Physician, who was an integral part of the civil government, and who was both physician to the court and the acknowledged head of the medical profession, must have attached to his opinion great weight with the judges, notwithstanding the institutional reverence for Hippocrates

In the sway of human passions and barbarous customs which prevailed in Europe during the "dark ages," the only medical laws of which we have any distinct account were for the prevention of the spread of infectious diseases, at Venice, A D, 1127 But specific quarantine regulations were not established until more than two centuries later, by Viscount Bernabo January 17, 1374 These regulations, however, are scarcely worthy of the prefix medical, inasmuch as they were under the administration of priests who were directed to examine the diseased, and point out to special commissioners the persons infected under penalty of being burned alive And only a few years later, the same ruler forbade the admission of people from infected places into his dominions, on pain of death Venice at the time was the leading commercial city in the world Hence Bernabo's example was imitated in numerous places during his lifetime, insomuch that the priestly authorities professed in most cases to trace the outbreak of the plague to the arrival of some ship, and commercial cities in the south of Europe were wellnigh closed against navigators, while local filth was reeking its deadly vapors, and consequently the plague continued to prevail till exhausted for the want of subjects

Bills of health were also first instituted at Venice, during the reign of plague, and first made obligatory in England in 1636 England, however, followed close at the heels of Venice in the institution of quarantine, at Gloucester, as early as 1348 Other cities and towns followed, with independent regulations, but no general laws were enacted for its enforcement until during the reign of James I, July 30, 1603

For a just appreciation of the contemporary neglect of municipal filth, the prevalence of filth diseases of every kind under the collective name of "plague," intensified by the quarantines, during the dark ages, so well described by De Foe and other historians, it is necessary that we should consider the narrow limits of medical knowledge during that period The teachings of Hippocrates were for the time forgotten, or subordinated to the haphazard results of chance in the place of reason, and "law" was the will of rulers who paid homage to ordeals based upon superstition, under the guidance of an ignorant priesthood The literature of the time on demonology and witchcraft forms an instructive chapter in the history of unreasoning governments who, in

[1] Airs, Waters and Places Genuine works of Hippocrates Translated from the Greek, by Francis Adams, M D, Surgeon William Wood & Co Vol 1, pp 156, 157

default of scientific and legal medicine, appealed to the Deity through the ordeals of fire, water and the judicial combat!

The cloud began to lift in the early part of the sixteenth century, under the reign of Charles V Hippocratic medicine had begun to take root The criminal code of the Germanic Empire, enacted by the Diet held at Ratisbon in 1532, comprehends the first appreciation of rational medicine in union with law This justly celebrated code requires that physicians *shall* be called by the courts in all cases where death has been the result of violent means, whether accidental or criminal Among its first notable fruits was the speedy overthrow of most of the dominant superstitions which had fettered the public mind and cost the lives of thousands of innocent people during the immediately preceding centuries Closely following the criminal code of Charles V, numerous heterogeneous ordinances of the Kings of France were formulated into codes and converted into a system of positive enactments In 1606, Henry IV gave letters patent to his chief surgeon authorizing him to appoint two physicians in each town, whose duty it was to report upon all cases of accidental death The office of *coroner*, however, is of more ancient origin, among the Saxons, as early as A D 905 in a charter of King Athelstan The name is derived from the fact that the coroner, as originally constituted, had chiefly to deal with pleas of the Crown, and had, therefore, much more to do with law than medicine, which inquests, at that time, did not involve And even yet, in England, the Lord Chief Justice of the Queen's Bench is the principal coroner in the Kingdom, and may exercise jurisdiction in that capacity in any part of England, though there are particular coroners for every place of importance, and in some counties several It is the only office in England charged with the investigation of crime, and so long as the coroner is not accessible, there is no authority to examine witnesses until a suspected person has been actually charged or accused before a magistrate Hence his functions in England, especially, still appear to have much more to do with law than medicine, though there, as in this country, medical men often fill the office, but rarely any other persons except lawyers, and consequently inquests there are devoid of the odium so common to the office in this country, consequent upon the want of professional competency

In France the office of coroner has continued, as from the first, chiefly medical, and has attached the most importance to medical evidence In 1667, Louis XIV decreed that in all criminal matters requiring reports, courts should be assisted by at least one of the physicians named by his chief surgeon, and of such binding obligation were these ordinances that, in 1680, a decree of parliament set aside judgments of inferior courts because they had been rendered *without* the *intervention of medical experts* Indeed, more weight appears to have been attached to the importance of medical testimony in coroners' cases in France, two centuries ago, than *now obtains* in the United States, insomuch that the office of coroner in this country has fallen into such deserved ill repute as to have been rightfully abolished in some of the States, and supplanted by other and better means of determining the cause of death notably in Massachusetts, by the appointment of *Medical Examiners*

As a branch of special instruction in connection with medicine, medical jurisprudence appears to have been first organized into a science and taught in the medical schools of Germany, in the latter part of the eighteenth century But the first professorships of the science were created in France, in 1792, and in 1803, the University of Edinburgh followed the example But in England no similar chair was established in any college until 1820, sixteen years after it was first taught in a course of lectures in Columbia College, New York, by Dr James S Stringham, then Professor of Chemistry, and annually by the same professor until his death in 1817 He was succeeded by Dr John W Francis, who held the chair until 1826 Meanwhile, Dr Charles Caldwell gave a course of lectures on the same subject in Philadelphia, 1812–13, and in 1815, Dr Theodoric Romeyne Beck was called to fill a similar chair in the Western Medical College, and to him and to his masterly work, first published in 1823, Forensic Medicine, in this country at least, is indebted for having been organized into a concrete science

In the preceding sketch of the application of law to medicine and its outcome, the first points of contact continue to be those of the greatest importance —the preservation of the public health with regard to local and meteorological conditions, regimen and infectious diseases, medical police and medical evidence, laws regulating marriage and the relation of the sexes, distinctions in the nature of wounds with regard to penalties, disposal of the dead, the *preservation* of *fœtal* and infantile life, quarantine and State physicians are the foundation of, rather than stepping stones to, the elaboration of the same subjects in the present advanced stage of medico legal inquiry The full consideration of any one of these subjects would consume more time than we have to devote to them all—to say nothing of their elaboration into side issues of great importance

Referring the bearings of Medical Jurisprudence on State medicine to the Section of this body specially devoted to it What for example could more profitably engage our attention than the preservation of infantile life, which was the special care of the Romans twenty-six centuries ago? Alas! it is doubtful whether we have much improved upon it, or even that of the barbarous Greeks who sacrificed their weaklings only—*fœticide*, at least, without regard to the utmost vigor of health and the imminent risk to the life of the mother, in the United States is *not a crime* Infanticide, at common law consists in the doing of any act whereby the death of an infant child is caused after it is fully born alive It is distinguished, by law, from the killing of a child within its mother's womb, which is known as *fœticide*

When the death of a newly born infant is occasioned by an unlawful act, as distinguished from mere accident or unavoidable casualty, such an act

constitutes the crime of felonious homicide, and may be either murder or manslaughter, according to the circumstances of the particular case In every instance, however, the death must occur after the actual birth of the child, *or no crime is committed* If a person uses means for the procurement of an abortion upon the mother, either by the administration of medicines or by the use of instruments, or in any other way whatever, and the fœtus is destroyed before birth the act is neither murder nor manslaughter, at common law, but only a misdemeanor[1] It is not indictable to procure an abortion with the consent of the woman unless she is quick with child, and quick with child is defined by the law to mean that the period has not arrived when the life of the infant has commenced, a fallacy based upon an old English law, which no longer obtains, that the use of the term abortion, medically, is limited to the expulsion of the contents of the womb before the sixth month of gestation But that law has long since been repealed, abortion under English laws now means the expulsion of the fœtus at any period of gestation, and its procurement is reckoned a felony This ancient, but now exploded theory that life in the fœtus does not commence until the third or fourth month of gestation, is founded upon ignorance and the misconception of facts—and contrary to the revealed truths and investigations of modern science

This fallacious idea that there is no life until quickening takes place, has been the foundation of, and formed the basis, and been the excuse to ease or appease the guilty conscience, which has led to the destruction of thousands of human lives

In physiology a cell or cellule constitutes the origin or commencement of every plant and animal and the elementary form of every tissue, in fact the entire organized human body may be considered to be made up of a congeries of cells, each set having its own life and appropriate functions From these cells the embryo and fœtus is developed This is a truth so well settled that no well informed physician would care to deny it Should we not then assert most positively that the life of the fœtus commences at the moment conception takes place, and therefore the destruction of the fœtus, at any period of gestation, should constitute murder? Abortion is alarmingly prevalent and increasing especially among the higher classes and well to do American women Ladies present themselves to their physicians—with a thousand and one excuses—for getting clear of their offspring And it is a lamentable fact that there are persons who call themselves physicians willing listeners to their earnest entreaties and appeals

I was consulted not long since, by a reputable physician of experience, upon this subject, and he asked this question "Which do you think the greater crime, the production of a miscarriage, upon the repeated and earnest solicitation of the mother, or compel her to go the full period of gestation, with great worriment, and perhaps sacrifice of her life in giving birth to her child?" I replied, "Doctor, what is the object of our noble profession? Is it to save or to destroy life?" He answered, "To save life, of course" Besides, there is more danger in the unnatural and hazardous procedure of abortion, than the natural process of gestation and parturition

The physician's responsibility in this matter is very grave, and they should do all in their power to discourage this prevailing tendency of the times to fœticide, and teach that life commences with conception God forbid that anyone calling himself a physician should be tempted by any appeal however pressing and piteous, or by any fee however large, to become the assassin of the unborn, in any stage of its development I suggest that a special committee be appointed by the Association to report at its next meeting, upon the *criminality of fœticide* and such measures as may be commended for legislative action for its prevention and punishment[1]

The next subject to which I would invite special attention is to the duties commonly exercised by coroners, and the importance of an improved medical police in regard to immigration—with special reference to the detection and prohibition of chronic invalids and insane persons

The Act of Massachusetts creating Medical Examiners in place of Coroners, has already been referred to

The general duties of Medical Examiners in addition to, or instead of coroner's juries, as at present exercised in most of the States of the Union, as summed up by a joint committee of lawyers and physicians of the New York Medico Legal Society a few years ago, are as follows

"To visit and carefully examine the body of any person reported or supposed to have been slain, or suddenly died, or mortally wounded, or been found dead under circumstances requiring inquisition, make an autopsy if it shall appear to be necessary to ascertain the cause of death, and if it shall appear to said examiner that there is no reason to suspect that a crime has been committed, he should be required to make a careful and detailed report in writing in duplicate, of his examination and autopsy, if any, and deliver one without delay to the nearest coroner and the other to the District Attorney of his county, which report should also contain a statement of the probable cause of death, to be duly verified, whereupon he should give the requisite burial certificate, and, in case the person shall appear to have been a stranger, and no relation or friend shall undertake his burial, give orders for such burial at the expense of the county

"In case the examiner shall be of opinion, from such examination, that a crime has been committed causing or contributing to the death of a person, or he shall entertain doubts upon the subject, he should so report in addition to the other matters above suggested, to such coroner and district attorney, and if he should deem it neccessary, call a chemist to aid in the examination of the body, or of substances supposed to have caused or contributed to the death, and such chemist should be entitled to such compensation as the medical examiner shall certify to be reasonable, and no other chemical or medical examination shall be made at public expense

[1] This Committee was appointed, and consists of Drs J N Quimby N J, W B Atkinson, Pa, and W H Byford, Ill

"On receipt of the last named notice and report, the coroner should without delay institute and prosecute an inquest into the cause of such death, and the name or names of such person or persons who shall appear by said testimony to have contributed to said death should be duly certified by said magistrate, and delivered to the district attorney for his action, and in case it shall appear that said person or persons are at large, said magistrate should be required to issue his warrant for their arrest, and bind the witnesses to appear as such before the next grand jury It should be made the duty of any person who may become aware of the death or mortal wounding of any person, requiring view or examination aforesaid, forthwith to notify the nearest medical examiner, and any wilful or culpable neglect so to do shall be adjudged a misdemeanor" (Medico Legal Paper)

I would suggest as an improvement upon this recommendation to entirely dispense with coroners and repeal the laws providing for them, and that, instead, all the duties and powers of the coroner in relation with the district attorney as recommended in this report of the Committee of the Medico Legal Society, be devolved upon the *medical examiner* and district attorney A recent law in Connecticut, requires that all the coroners in that State shall be attorneys at law It is said to have thus far resulted satisfactorily But the superior fitness of medical examiners for the direction of the duties involved, are so self evident in some of the most prominent aspects—for example, in all cases of alleged malpractice, the necessity for the employment of medical experts, the pathology of the subjects of life insurance and insanity—as to leave no room for question This subject, however, is also so important, and yet so indefinite in its relations to the medical profession, I recommend that a special Committee be appointed on the *Duties commonly exercised by Coroners*, to report at the next meeting

Your attention is now invited to the increase of the dependent classes, particularly of the insane The annual report of the State Board of Charities of New York, shows that the increase of the number of the insane for 6 years in that State was 42 per cent —while the increase of population had not exceeded 12 per cent The report states that, in "searching for the cause of this great and steady increase in the number of insane, in the institutions of the State during this period, it fails to find them in the impaired material, social or other conditions of the State likely to induce the disease, and therefore comes to the conclusion that such increase comes almost wholly from the shipment of insane and other enfeebled persons to our shores from different countries of Europe"

Another important fact is, that *while the number of insane and enfeebled persons is increasing in this country, out of proportion to the increase of population*, they are at the same time on the *proportional decrease* in the *United Kingdom and the Countries of Europe* Therefore, I also recommend a Committee be appointed of Medical Police in relation to Immigration, with special reference to the detection of chronic invalids and insane persons, and the necessity for their exclusion

Next, and finally, your attention is invited to the needful medical jurisprudence of a subject, with the baneful results of which medical practitioners are of all other persons most familiar I refer to drunkenness To dwell upon the effects of alcoholic stimulants, medicinally or otherwise, in this presence, would be entirely supererogatory Moreover, all medical practitioners are more or less familiar with the means hitherto tried for the prevention of drunkenness They have all failed because of their indirectness or narrow limits It is after a good deal of close study of the subject and of much that has been written upon it, that I have arrived at what may be considered very radical conclusions by some for whose opinions I entertain a high respect, but I have become so thoroughly convinced that drunkenness, in general, is a wilful act for which drunkards themselves should be held mostly responsible before the law, that I can no longer withhold the expression of my profound conviction that all the efforts to restrict drunkenness by excise laws, the imposition of fines upon the dealers in alcoholic liquors, and the arguments in favor of its being a disease may be of use as an educational basis, yet if great prudence is not taken in discussion these speculative points may result in the promotion of drunkenness instead of abstinence from the use of alcoholic liquors Unfortunately, drunkenness is so common that no person possessed of ordinary intelligence, will deny that he has sufficient knowledge of the intoxicating effects of alcohol without the necessity of putting it to a test in *his own* person And the exercise of the human will is surely not to be sacrificed to the gratification of the passion to drink even under the pressure of heredity tendencies, for physiology teaches that even these may be resisted by the power of the will, and in most cases overcome But to meet the exceptions, I hold that the State and Society is also responsible to a large extent for much of the drunkenness that exists in our midst The first or primary object of the State or National government is the protection of Society What right then has the State in its corporate capacity, to enact any law or system of laws by which, and through which Society is corrupted or injured thereby?

Does not the State, by license laws, enable her agents (the saloon keepers) to establish themselves in every city, town and hamlet, through which means intemperance is encouraged and promoted, thus becoming *particeps criminis* of drunkenness and its sequences by those who have lost their self control Much ingenuity is exercised, and numerous citations are made by the advocates of inebriety as a disease, but they all fail to show that alcohol bears any relation to the particulate or septic cause of disease, which on once being introduced into the human system multiplies and magnifies as do septic poisons generally Be it far from me, however, to contend that the physical structure of the human body is not so subject to the influences of the continuous use of alcohol as to be liable to change and to become diseased, even to the extent of creating a diathesis, or

This Committee was appointed and consists of Drs H O Marcy Mass, J H H Burge N Y, and W W Dawson Ohio

that the progeny of drunkards before any such diathesis is established are not commonly weakminded, and more likely to become intemperate than the children of other persons, but these truths, instead of in any way detracting from, or affording any palliation of the vice of intemperance, add to its enormity and strengthen the proposition to make drunkenness a crime amenable to law

It is of almost daily occurrence that, in the summary of news, may be read under the head of "Whisky's Work," paragraphs such as the following

Thomas Jones was fatally shot by Michael O'Hara, at Portland, on Sunday night Jones was drunk and abused O'Hara

Chicago, January 17 Last night Abram Night and Louis Kratz got into an altercation over a trivial matter in a saloon, which ended in Kratz stabbing Night several times, slashing him terribly Both are young men, respectably connected Night was taken to his home in a critical condition Kratz is in jail They were under the influence of liquor

New York, April 7 This morning about 1 o'clock, a pistol shot was heard by policeman T P, Sixth Avenue, who on hurrying to the spot found James York lying dead on the pavement in front of Patrick Riley's saloon It was the result of a quarrel between the deceased and a crony, named Joseph Burns, both being intoxicated

There is no more reason in calling such crimes "Whisky's Work" than there would be in calling the attempted robbery of Weeks' house in Brooklyn, which resulted in his murder by the convict who is now under sentence of death, "table silver's work,—which the thief was after in the dining room, or than there would be in calling the robbery of a bank, involving may be the death of the banker or a watchman in its defense, "banker's work"

The primary crimes in these cases were in the first series getting drunk, in the second, stealing, murder, the consecutive crime in both It would by no means be a difficult task to draw the parallel between the downward course of the drunkard and the thief, diving deeper and deeper in their potions and portions, ere the one becomes a drunkard and the other a cracksman But here the parallel ceases, the one finds himself in jail under sentence of death or in the penitentiary, where both should be, and the other in an inebriate asylum, petted and pitied for the sins of his fathers or the man from whom he obtained liquor Alas, for all such false philosophy and and wasted sympathy

Getting drunk should be considered a deliberate act in the face of common sense Yet there are advocates against punishment for crimes committed by persons when intoxicated, on the ground that such persons are in a state of "temporary insanity" The arguments they use are of a piece with those which would hold the distiller or seller of the liquor wholly responsible, instead of him who deliberately buys and drinks it, and which, if pursued logically, would hold the manufacturer or seller of fire-arms guilty of every case of murder or suicide committed by using them And granted the "temporary insanity," what should be the retribution to him who induced it—who *voluntarily* placed himself in the condition to debase his race, to commit arson or murder, to wreck a train of cars or to sink a ship?

Alas, drunkenness is the crime of crimes And the National and State governments which enact license laws which permit and assist in the sale of liquor, that aids and promotes drunkenness, or that people and community which permits or tolerates the establishment of saloons in their midst, are aiders and abettors of the crime

Let this numerous and representative body of medical men in whose hands are the issues of life and death, and who have so often in times past sounded the alarm of impending danger, rise to the importance of the danger by sounding the alarm against this Goliath of vice and crime Let the Medical Profession in its national capacity issue a new proclamation and, if necessary, put new sentinels upon the watch towers to warn the people of the rapid and perceptible inroads that alcoholic beverages are making upon the human race

Let the Medical Profession proclaim the fact that modern science and the latest investigation have sufficiently proven that alcohol destroys the *natural forces of the body*, that it *retards* and *prevents* the *development of the nervous system*, which effect is even extended to the *unborn infant*, that it perverts and deteriorates the red corpuscles of the blood and interferes with its natural flow, that it is not a preserver or conserver of *mental* or *physical* powers, that it does not and can not *per se*, form true natural tissue or good blood At the rate drunkenness is increasing in civilized communities, it is estimated by good authorities that in a little over one hundred (100) years the Caucasian race will degenerate to the level of the Mongolian, and become subject to all kinds of immoral practices In proof of this, I may cite the "result of the anthropometric examination of fifty (50) habitual prostitutes, who had been inmates of brothels for not less than two years, reported by Dr Praskovia N Tarnovskaia at the first Congress of Russian alienists at Moscow" (*Vratch* No 9, 1887, p 216) For the sake of comparison the Doctor examined in the same way fifty peasant women of the same age and as far as possible of the same intellectual development, etc

The result of this unique investigation may be summed up as follows

1 The prostitutes presented a shortening, amounting to half a centimetre, of the anterior, posterior and transverse diameter of the skull

2 As many as 84 per cent of the habitual prostitutes showed various signs of physical degeneration, such as irregularity in the shape of the skull, symmetry of the face, anomalies of the hard palate, teeth, ears, etc

3 In 82 per cent of the prostitutes the parents were habitual drunkards

Can any physician, can any thoughtful person, after reading this appalling statement of facts, close his eyes to the true *modus operandi* of alcoholic stimulants, or deny its *deteriorating* and *destructive influence* upon the *human system?*

Formerly the medical profession through lack of

experimental and practical knowledge of physiology and chemistry, but little understood the action of alcohol upon the human system, and therefore they *recklessly* and *indiscriminately* prescribed alcohol to their patients in season and out of season, which has resulted in inculcating much of the habit of inebriety among the people

Hence the medical profession should be *first* to voice the results of the modern investigations which point unmistakably to the destructive action of alcohol upon all the tissues of the body, and especially upon the nervous tissue And the sooner professional, personal and public effort is exercised in exposing its nakedness and its destructiveness, and making it odious and punishable, instead of apologizing for it and making it excusable, either in the seller or the drinker, the better for society and for the human race

ORIGINAL ARTICLES

A CASE OF PYO-SALPINX—RECOVERY WITHOUT OPERATION WITH REMARKS ON TAMPONNEMENT OF THE VAGINA IN PELVIC INFLAMMATIONS

Read before the Section on Obstetrics and Gynecology, at the Thirty eighth Annual Meeting of the American Medical Association held at Chicago, June, 1887

BY WILLIAM WARREN POTTER, M D ,
OF BUFFALO N Y

When the science of gynecology began to differentiate the pelvic diseases of woman, a vast field, before either untrodden or only slightly so, was thrown open in the domain of gynecological therapeutics, which is now being cultivated with an interest, assiduity and success, not second to that in any department of medicine Time was, and that not so very long ago, when it was sufficient to tell a woman she had "ulceration," or "prolapsus," or "inflammation," and it was understood that these conditions all belonged to the womb itself, for the other pelvic organs had hardly been explored in a pathological sense Now it is essential, not only to define the character and degree of a uterine displacement, to diagnosticate between ulceration, erosion, and laceration of the cervix, and to untangle the various forms of inflammatory action to which the womb is liable, but we must understand and explain the multifarious sympathies and reflexes which these several conditions engender or lead up to Nay more the ovaries, tubes, ligaments, bladder, rectum, cellular tissue, and peritoneum, must all be carefully and patiently searched for any absolute or latent changes in structure, shape, or function All this, and even much more not necessary here to enumerate, it is absolutely requisite that the gynecologist should know and utilize in his daily investigation of cases, even patients are satisfied with nothing less, since they, themselves, have in a measure kept pace with the progress of events, obtaining, in one way and another, a fairly intelligent understanding of their own cases

One of the important consequences of the more accurate differentiation and classification of pelvic disease, has been to invite surgical aid and interference in regions which were previously considered unsafe for the knife, and for maladies which had before been regarded as incurable The road to fame is so direct, and its way so broad and inviting, through the open gateway of a brilliant and hazardous surgical operation, it is neither strange nor surprising that many men, ambitious for a distinction which can be so suddenly attained, have eagerly embraced opportunities to lay open the abdomen in search of an offending ovary, or tube, or a mischievous morbid growth of some kind, justifying the procedure upon a successful result, or, if not this, then upon the reported success of somebody else in an apparently parallel case

The value of the work of Battey, Tait, Hegar, and others, and the benefits which their researches and teachings have accomplished cannot well be computed, nor is it my purpose to disparage it or speak *slightingly of them,—I would not if I could,* I could not if I would When their work is properly understood, its application to diseases of the uterine appendages justly made, and the balance sheet fairly struck, it will be found that there has been great and inestimable gain But will it not be just as certainly discovered that their teachings have often been misunderstood, their deductions misconstrued, their cautions unheeded, and their results misinterpreted, and further that, as a consequence, much of the surgery of the abdomen in this field has been done either indifferently well, or unnecessarily?

Following upon a few established successes there has been, of late years, such a stampede of gynecologists towards the Mecca of laparotomy, that there is some danger of neglect in the comparatively minor fields *I have,* myself, known a most capable and distinguished teacher and worker, skilled in all the various details of gynecology, become so captivated with abdominal surgery as to fairly dread the care of any other class of cases, and to become impatient and restless over the lesser maladies in the department of diseases of women for which he was consulted This eager chase for fame in the direction named, and the interest which naturally attaches to its recital, has so whetted the appetite of the profession for such literature, that it requires some courage to seek the ear of an assemblage like this, with anything less than a formidable array of cases, duly tabulated, classified and analyzed, showing a year or two's work in this seductive and fascinating field, and these statistics, when amply fortified with pockets full of ovaries and jars filled with tubes,—trophies of the bloody conquests—bear testimony in no uncertain manner to the fierce battles and renowned campaigns which the courageous author has waged against the reproductive organs of woman, all done under the most approved and painstaking antiseptic precautions

But may it not be possible—barely possible—that some of these operations could have been avoided and the organs saved, by the adoption of a more conservative plan? Bear with me while I relate a

case, which will serve as a partial answer to this question from my standpoint, and which I promise shall be brief, even if it shall possess no other merit

About a year ago a patient, recommended by another physician, came from a distance to reside near me for professional care The previous history of her illness may be summarized about as follows Eight months before she presumably aborted, though neither she nor her attendants—physician or nurse—were ever quite sure that they saw a fœtus, the supposition being that the embryo escaped, unobserved, with the membranes intact This happened in her first pregnancy, about two years after marriage, from which time forward, November, 1885, she was never in good health The winter was passed in a state of invalidism, though she was not altogether compelled to keep in bed Early in March she had a hæmorrhage, not very severe, but it continued rather passively during that month and the most of April, associated with pain and a general physical enfeeblement The flow finally abated or came and went alternately, but the pain increased, becoming at intervals quite severe, the abdomen began to enlarge, particularly on its left side, growing tender as well, so much so, indeed, as to render even the lightest clothing oppressive During May and June there was apparently some general physical improvement, but never a long cessation of pain, and menstruation was irregular and otherwise unnatural So much for its history before I saw the case

Upon my first examination, early in July, there was great tenderness of the intra-pelvic organs and tissues, the fundus uteri was swayed toward the left, and there was fixation though not much enlargement of the womb There was a large banana shaped bunch at the left of the uterus which could be outlined externally, though the degree of palpitation necessary to an accurate diagnosis was so painful that I deferred any opinion until further observation The cellular tissue was hard and tense, indicating unabsorbed exudate around and adjacent to the left broad ligament, and a week later I felt distinct nodular masses along the vaginal roof As time went on the density of the cellular tissue diminished, the mobility of the uterus correspondingly increased, and the tenderness likewise lessened, to an extent which soon permitted sufficient bi manual manipulation to outline a distinct enlargement of the left tube, thus explaining the banana like tumor before observed This finally grew softer and pus was discharged through the uterus late in August, during my temporary absence from home On my return I found considerable diminution in the size of the tube, and much relief from pain, together with a general improvement in health, manifested particularly in a greater ability to walk, which had before been impossible to any extent

This improvement was continuous until October, when the tube again grew tender and swollen, but another discharge of pus, also *per vias naturales*, though less in quantity than the first time, soon brought relief again From this time onward the gain was regular without interruption, the shrinkage going steadily on and the strength improving, until I dismissed her about April 1st, of the present year, practically cured I have been thus specific, that there might be a clear understanding as to the grounds on which the diagnosis was based

Now for the treatment I commenced, *in limine*, a systematic and regular tamponnement of the vagina, packing it neatly and snugly, but not forcibly nor oppressively, twice a week, employing for a day between each packing copious lavements of hot water The hot vaginal douche was also used thoroughly each morning of the treatment, just prior thereto, after which the vagina was insufflated with iodoform, bismuth, mineral earth or other powder, and then the small pledgets of cotton, wool, or jute, were introduced in sufficient numbers to make gentle, firm, and even pressure, as well as afford comfortable support The tamponnement was done either in the Sims' or knee chest posture—generally the latter, as it proved the most comfortable to the patient and, likewise, permitted the utmost thoroughness in the work Such relief did this plan of treatment afford the patient, that she readily lent an earnest and hearty co operation in carrying it on, and, moreover, whenever it was interrupted for a few days, as occasionally happened from one cause and another she observed such a marked change in her symptoms and feelings, that I was induced to instruct another physician, as well as her nurse in the method, so that the work could be carried on whenever I was unable to attend to it myself

Finally, appropriate constitutional treatment, principally iron and arsenic in one form and another, was associated with the local measures described, and this was all There was, to be sure, much of detail not necessary to elaborate here, but these were the essential factors of the entire management, and they were continuously employed during a period of nine months

Other cases of a somewhat similar nature, and likewise similarly treated, have fallen under my observation, but this one is sufficiently typical of its class to illustrate my meaning and emphasize my purpose in seeking the ear of the Section at this time Of course I shall have missed my object entirely, if I have failed to impress two points with sufficient impact to challenge attention, thought, and criticism, viz

1 That many cases of disease of the uterine appendages may be arrested in their progress and diverted to successful issue without operation, by appropriate treatment resorted to in their earlier stages

2 That the early employment of regular, prolonged, and systematic vaginal tamponnement affords one of the safest, surest, and simplest ways of preventing the ravages, in whole or in part, of the maladies in question, and of averting that mutilation of the sexuality of woman consequent upon excision

VAGINAL TAMPONNEMENT

This occasion presents to me the opportunity of offering some remarks upon the employment of vaginal tamponnement in the treatment of pelvic disease in general, which I gladly avail myself of, since

it is a subject which is again creeping into medical literature, through society discussions and papers In a paper which I read before the Medical Society of the State of New York some years ago, this subject was discussed in considerable detail, with special reference, however, to its employment in the management of uterine and ovarian displacements Now, with the added experience of years and cases, I desire to reaffirm and supplement my former statements, extending the principles to the treatment of inflammatory conditions of the intra pelvic viscera and tissues of whatsoever nature or cause, whenever they can be made applicable At that time my experience was limited to the tampon formed of cotton alone, or nearly so, but now I find wool and jute even more serviceable in many cases, and in this experience I am happily in accord with many other observers In the paper referred to I spoke emphatically against the use of the absorbent cottons, finding them too inelastic when wetted, either by the medicated fluids in which they were dipped, or by the natural or unnatural juices and fluids of the body which they absorbed after introduction In either case they become too sodden and boggy to avail much either for support or elastic pressure, and these are the particular indications of treatment to be fulfilled

To obtain the full benefits of this treatment in pelvic inflammations, as well as displacements of the viscera, or for other conditions in which it may be employed, it is of the first importance that the packing shall be well done It must be so placed that it will afford ample support, give secure rest to the parts, make firm pressure, and not become dislodged or sag during its wearing, while, at the same time, it must not produce discomfort, interfere with the functions of the pelvic organs, nor cause irritation in the least degree To this end the tampon must be multiple, *i e*, it must consist of several small pledgets, introduced one after another until constructed of sufficient size, and not made a single large wad or mass, which fits nobody This is important, since much of failure or discredit to the method, comes from faulty construction of the tampon, or its ineffectual placing, or both These pledgets should be prepared beforehand, to each of which should be attached a thread (Coates' No 8), upon which traction can be made by the patient in their removal, singly or in groups, according to the convenience or necessities of the case The threads can then be united in a single knot and left hanging from the vulvar orifice, or tucker inside the vagina if preferred The principal point is, that every nook and cranny of the vaginal cavity shall be occupied, while due caution shall also be observed against overdistention, and this, I affirm, can only be accomplished by means of the multiple tampon It is well to have the vagina first thoroughly washed out with hot water, then dried, and finally insufflated with some appropriate powder, before the tamponnement is begun This serves the double purpose of contributing to the retention of the tampon firmly in its place, and of rendering it antiseptic

Formerly I was in the habit of saturating the first or upper portion of the tampon—two or three pledgets—in a glycerate of iodoform, tannin, or other material, but of late, acting upon the suggestion of Dr Engelmann, of St Louis, I employ dry powder in the main, and obtain much satisfaction in the use of subnitrate of bismuth, which appears to have the widest range of adaptability of any remedy with which I am now familiar,—iodoform, and mineral earth standing next on the list in useful importance The tannate of bismuth serves a good purpose, when an astringent is needed

When Dr Engelmann first advised the use of bismuth, for it was he who brought it to my notice in connection with his plan known as the "dry treatment," I confess that, being not a little skeptical on the subject, I used it somewhat half-heartedly at first and, therefore, did not obtain satisfactory results, probably in part because I did not employ it with that precision and thoroughness which I ought, but certainly in great part because I did not fully comprehend its capabilities Now, after a considerable experience with the dry method in general, and with bismuth in particular, I am prepared to endorse, as far as my experience goes, all that he claims for them. While it is probable there are cases, and I have seen such myself, that thrive best under the moist treatment, yet I consider his plan a decided step in advance, a considerable reinforcement to our resources, and, if his directions are adhered to in carrying it out, I believe a greater measure of success in the management of pelvic inflammations will assuredly follow

One word as to the position of the patient during tamponnement, since this becomes a question of considerable importance if we would attain the highest degree of success Taking it all in all, I believe the knee chest posture approaches nearer the ideal for this work than any other The semi prone or Sims' position becomes some cases when, for any reason, the other is inadmissable The dorsal decubitus is almost worse than useless for the business in question, since, with the woman lying on her back, it were impossible to crowd the tampon up behind the uterus, or any other tender organ, with sufficient firmness to make it either useful or retentive In the genu-pectoral posture, however, it is comparatively an easy matter to restore the pelvic organs, in the majority of cases to their proper level, for in it we obtain a reversal of normal gravitation—an aid of no mean import, when the structures are so very tender as they are usually found to be In this position the impacted organs, with their tissues more or less engorged, become readily unshipped from their habitats, and measureably restored to their proper places, the entire field is brought within easy view, and everything conspires to simplify the process of constructing the tampon in a thoroughly mechanical manner

Since 1877, when, following the teachings of Dr. Henry F Campbell, I first began the systematic use of the knee chest posture in the reduction of pelvic visceral displacements, and of the multiple tampon a year later in conjunction therewith (at the suggestion of Dr Bozeman), I have employed them in

many hundred cases, and the statements here made are the outgrowth of, to say the least, not a limited observation in the direction named As a result of this experience I have reached the following conclusions

1 In retro deviations of the uterus the reposition of the organ should be made in the genu pectoral posture, without the aid of any other repositor than the finger, it should then be shored up and held in place by the multiple tampon This treatment should always precede the employment of the pessary (when one is required) for a longer or shorter period, according to the peculiarities of each particular case

2 The foregoing applies with equally cogent force to inflammations and prolapses of the ovaries, whenever these principles can be adjusted to such cases

3 In abrasions, erosions, and ulcerations of the os, in the hyperplastic womb, in lacerations of the cervix, in subinvolution, in cystocele, in rectocele, and in all conditions of disturbed or impaired nutrition of the pelvic organs, it affords a most efficient form of either preparatory or curative treatment, tending to give the organs rest, restore their tone, deplete engorgement, remove blood stasis, improve locomotive power, and arrest retrograde tendences in general

4 In pelvic inflammations whether of cellular, peritoneal, tubal, or other origin or involvement, it will often change their current or arrest their progress, prevent suppuration or abridge its ravages, and thus frequently guide to a successful issue, without the necessity of a final appeal to a formidable and perhaps dangerous operation

Dr J H Etheridge, of Chicago, in his published remarks on this subject, has very succinctly and aptly said that, "The inflammations of the uterus we are usually called upon to treat are not active, but chronic, and if we hold the uterus up so that it can drain itself properly through the veins, the nutritive changes which take place will be facilitated to the greatest extent" And again "When the uterus is enlarged it becomes heavy, sinks, and presses the veins which carry the blood out of the uterus, and we have strangulation By raising the uterus up, the blood flows freely and the nutritive changes always tend to health" These are the wise words of an accurate observer, and deserve repetition as expressing, better than I could, one of the important ways in which benefit is obtained through this method of treatment

Finally, I may remark that, though it does not fall within the scope of this paper to discuss this interesting subject exhaustively, I have sought nevertheless, to touch upon some of its prominent features, hinting here and there at points of importance in its application, and glancing at some of the salients of its detail, trusting to the discussion which I hope may be elicited, to elaborate and embellish the text better than I could, or, perchance, to open up new or little-trodden paths for exploration

284 Franklin Street

DISCUSSION

DR J H ETHERIDGE, of Chicago Very little remains to be said, it seems to me, in addition to what the Doctor has given us, and I think he is to be congratulated upon the completeness of his paper, as he covers the ground very thoroughly I will mention a few points in addition, which may be of interest He says that he tampons the vagina with successive pledgets of cotton or wool and attaches threads by which they are withdrawn In rather an extensive experience in the use of this tampon for these troubles I have found a small long strip of antiseptic wool, about as wide as my three fingers, can be very readily carried up with the dressing forceps until the whole vagina is thoroughly filled The tampon will remain in place in some cases many days without any inconvenience as to the odor or irritability of the organs that it supports I have made a universal practice to leave it, if there is no unusual odor or discharge from the vagina, I leave it in four, five and six days and have left it in as long as ten days I am now treating a patient for prolapse of the ovary, who was almost a total wreck, when I began the treatment She had gone to bed to stay there permanently, two or three times in the middle of the month she got up and went around a little, but she was not half a woman, she thought This method of treatment was instituted, the vagina packed full with the wool and the very next day the woman went out shopping and she has been out every day since At first I used to remove the tampon and let her menstruate while in a recumbent position, but one day she got the start of me, the day before I reached her the menses came on and she still wore the tampon She experienced no inconvenience and there was no disagreeable odor about it, so she wore the tampon for a period of four or five days, during the flow and at the end of that time I removed it During her menstruation she went out, ran up and down stairs and all around and since then she has insisted on wearing the tampon through her menstruation, and I have been afraid to take it away from her I cannot reach the ovary now I keep on using the tampon but I have adopted this plan, twelve hours before I saw her the last time, I had her remove the tampon and do as she was inclined, go up and down stairs and do what ever she wanted to with perfect freedom By and by when I find I can let her go a week or longer I shall place the tampon just a week before menstruation and after awhile shall leave it out altogether If called upon to give an opinion as to the greatest field of usefulness of this tampon I should say movable ovarian prolapse

DR C R REED, of Middleport, Ohio I listened to the paper of Dr Potter with a great deal of interest, but I was reminded, after the conclusion of the paper and the remarks of the gentleman who has just taken his seat, that we are rapidly going back to the method of Dr Hodge of Philadelphia Twenty years ago in his work on "Diseases of Females," he recommended the use of the lever pessary in almost all diseases of the pelvic organs He said it would cure almost any of the forms of disease from which women suffered at that time, displacements of the uterus and ovaries, and he claimed and reiterated it with just as

much apparent authority as we now hear in favor of the tamponnement with jute or oakum or wool, that the proper form of lever pessary properly adjusted would overcome all these troubles if persevered in He condemned the use of caustics and other applications to the cavity of the uterus or to the cervix and os, and forcibly impressed it on the readers of his book I have no doubt that this treatment when successfully carried out will accomplish what the gentlemen claim for it, but, as I said, it reminds me of Dr Hodge's lever pessary There was one advantage of the pessary over the treatment recommended by the paper, it left the vagina free and unobstructed A pessary of proper size and shape had to be adopted and if one would not do the shape should be changed until it did answer the purpose It was the same claim made by Dr Potter, holding the organ up in its proper place

Dr Wagner, of Kansas City In order to get even with the gentleman, who has cured one case of pyosalpinx without operation, I had one case that I diagnosed as pyosalpinx that died for the want of an operation We insisted upon it but were not allowed to make an operation The pus was evacuated into the peritoneal cavity, and the woman died in a short time I would like to ask the gentleman who gave such immediate relief for prolapsed ovary if he expects that to be the end of the case?

Dr Etheridge Time alone will tell

Dr Bingham I wish to endorse the paper which we have just heard read, in every respect, as, in spite of the fact of Tait's results and the results of other men, my experience has taught me that the opening of the abdominal cavity is not the mild, simple, easy operation that some would lead us to believe I indorse the gentleman's views that before an operation, involving such risk as is inevitable in almost every case of that kind, that every means, short of abdominal section, should be used first, and then having failed we have that remedy as a *dernier ressort* I believe Dr Potter will indorse that view, and that when nothing else will do he will remove the ovaries But it is by no means a harmless operation The removal of a Fallopian tube for pyosalpinx is often more difficult than to remove an ovarian tumor Some doubt has been thrown on the correctness of the diagnosis in the case of pyosalpinx, in which tamponnement and appropriate treatment produced what we may well call a cure, and that without any particular risk to the patient, or the doctor either I believe that the Doctor is correct in his diagnosis and I know he is correct in his management of the case, as given to us Within the last year I have had under my care almost the same kind of case with a similar history, in which there has been repeated accumulations of pus, that could not have been any place else except in the Fallopian tube, and, had I had the skill that some have, I have no doubt I could have passed a sound into the Fallopian tube

Dr A S von Mansfelde, of Ashland, Nebraska I am surprised that the gentlemen, who spoke, have left untouched the main part of the paper The author throws out the proposition that it is in many cases necessary to operate in suppurative disease of the Fallopian tubes, then he tells us he had a case of pyosalpinx that he did not operate on, but cured Did he have a case of pyosalpinx? It reminds me of a case, in Chicago, not many years ago One of the professors of a leading college promised us a case of tumor of the breast upon which he would operate at the next session In the meantime he applied a poultice to the breast, though it appears he did not know what he did it for, and when the patient was brought into the lecture room and anæsthetized he found no tumor Now is it not possible that the gentleman had a case of pyosalpinx without the pus? It is certainly true that the greater number of cases of pyosalpinx owe their existence to gonorrhoea, that is a fact that nobody can deny When you have a case of pyosalpinx caused by that disease all the tamponnement in the world could not cure it There are only three terminations resolution, caseation or *coagulation necrosis, and rupture of the sac* The experience of the gynecologist is that the sac will rupture in the majority of cases I come from a part of the country where we are always in a hurry, we have not time to wait long, and it is not considered good practice or good surgery to let a case of pyosalpinx go many days and wait for nature to take its course, we open the abdomen and remove the Fallopian tube, and I think there are gynecologists in this room who will say amen to that Why we should preach a sermon of such magnitude upon a hypothetical case I cannot understand

Dr Green, of Indiana I simply rise to deprecate the sentiment of the gentleman from Nebraska, that physicians of the West are always in a hurry It seems to me that in the treatment of women, particularly in salpingitis of any kind, that to resort to the knife as soon as the disease is diagnosed is criminal There is no doubt in my mind that many cases of salpingitis may be cured by local treatment, neither is it doubtful that many must be operated upon, but that any physician, because he has a case of that kind and lives in the "Great West" should rush to the operation, is criminal

Dr W W Potter, in closing the discussion, said It is not necessary to take up much of the time of the Section, I want to note one or two points The question has been raised about the multiple tampon, Dr Etheridge find his manipulative skill so great that the single tampon answers the purpose I think it is a matter of individual tact very largely, I presume he may do quite as well with the single tampon as I and others do with the multiple tampon, but in the main I believe the multiple tampon has the widest range that is possible The point I want to make is that the vagina shall be neatly and perfectly packed without any undue distension or any disturbance of function, or irritation With reference to the question of retaining the tampon during menstruation, of course I could not cover every detail in a short paper, but it is very important I have seen cases over and over again, in which the woman would have excruciating agony during menstruation, and I have seen the pain relieved by forcing the ovary gently into its accustomed place, and holding it there during menstruation with the multiple tampon

With reference to the question of diagnosis, which the gentleman from Nebraska has raised, I left that to the judgment of the Section on a tolerably full report of the case, namely, a gradual pelvic inflammation which in the the first instance involved the cellular tissue and gradually crept into the tube, with slow exudation, being absorbed somehow, by manipulation this enlarged tube could be mapped out Without wishing to raise a laugh on this question, I submit that it would be well not to be in such hot haste in the matter as seems to prevail in Nebraska It is undoubtedly true that many cases of pyosalpinx are of gonorrhœal origin, and it is equally true that many cases come from other causes Dr Wagner, of Kansas City, has fairly presented the views I intended should be drawn from this paper

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RETROFLEXED SPLINTS FOR FRACTURES OF THE FOREARM

Read in the Section on Surgery at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY W D KEARNS, A M , M D ,
OF PITTSBURGH PA

Novelty, although attractive, ever engenders doubt, and oftentimes hasty rejection, and every innovation challenges closest scrutiny When, however, practicable, safe and intelligent, as the exponent of full and sound principles and practice, it will, ultimately, be earnestly embraced and adopted Especially may this be said of the phenomenal advancement in the record of medical science of the present day Throughout all the "fearful and wonderful" mechanism of our creation, through all its ample endowments by Divine wisdom and infinite power, in variety, scope, application and execution, that member of our body, the hand, is preeminent And yet no member of the human body is quite so obnoxious to violent injuries as the hand and forearm, and for obvious reasons No bone of the human skeleton (except, perhaps, the clavicle), is so frequently the seat of fracture as the radius, and no fracture has, perhaps, received greater practical study than that of the lower end of the radius, known as "Colles' fracture "

To a hasty study, and to the ready application of the principles involved in the restoration of the skill of the hand and forearm, when maimed by fracture of the radius at the lower extremity, or, indeed, fractures of both bones of the forearm at any and all points, your attention is earnestly invited As the rehearsal of the descriptive relative anatomy or of the pathology consequent to fracture of the forearm would be an unnecessary use of your time and patience, beyond certain essential parts and conditions which can be referred to as we proceed in our recital, I will enter at once on the discussion of the subject of this paper retroflexed splints in the treatment of "Colles' fracture," a term adopted as significant of the point at issue, also, as has been suggested, "the extension of the hand on the forearm " "Value of Ingenious Splints" is the heading of a short extract from a lecture by Mr Hutchinson, of London, in an issue of the *Medical and Surgical Reporter*, in which this distinguished surgeon says "that, as a commentary on the futility of inventing complicated splints and apparatus for fixing limbs, none of which ever meet general approval, he might refer to an ingenious instrument devised by Dr Gordon, of Belfast, after long continued anatomical study of Colles' fracture This, which was intended for general use among surgeons, is figured, says Mr Hutchinson, in a text book by a leading surgeon, *upside down*, and assuming from this, that even the author of the work is practically unacquainted with the splint, although he writes about it, what chance is there of its being universally adopted?" He goes on to say that not only Colles', but all fractures, are most successfully treated by extension, which can readily be applied through the agency of a simple straight splint, and, he continues, very thick pads should be fitted to the splints Now, this last consideration—this necessary and judicious stricture, evolves the great practical point in our present discussion, and introduces the great results in practice through the successful application of the principles advanced in the heading of this paper, and *a priori* concedes this acknowledged inefficiency of straight splints in seeking the aid of thick pads

The sad results, so often witnessed, in the marked "silver fork" deformity, the great abridgement and relative loss in the free movements and skill of the hand, for many weeks, and in elderly patients, perhaps for life, are a source of great dissatisfaction and perplexity We most naturally seek such measures as may aim at their prevention Whilst, at times, the fracture may be transverse, yet it is the common form, the oblique, and even more or less longitudinal, that present obstinate and persistent difficulties, the greater resistance to retention, and are the more exacting of the retaining splints

Complete reduction of the fracture is absolutely required, whatever form of splint may be applied, but the disastrous impairment of the functions of flexion, extension, pronation and supination, the anchylosis due to the inflammatory processes along the sheaths of the muscular tendons, ligaments and fasciæ, these mischievous structures must, if possible, be averted, and this insufficiency of the straight splint, however deeply padded, to secure the necessary angles of flexion of the wrist, and the metacarpo phalangeal articulations, suggested the congruity of the flexed splint—a splint less complicated than a thickly padded straight splint, inasmuch as a comfortable condition, and proper relaxation of all the tendons and fasciæ of the forearm and hand, are at once permanently secured

Whether, then, the fracture of the radius be transverse, oblique, more or less longitudinal, or more or less comminuted, the conditions governing the form of the retaining splints are, after complete reduction, alike exacting, and may be, it is maintained, best subserved by "retroflexed splints," which seem greatly effective in preventing the formidable impairment of the functions of flexion, extension, pronation and supination, such attained relaxation obviating the inflammatory adventitious processes in the sheaths of the muscular tendons, ligaments and fasciæ, whilst the bony structure is progressing, through the analo-

gous process of provisional callus, to ossification

The essential principles maintained in the treatment, not only of Colles' fracture, but in that of all fractures of the radius and ulna, may be generalized as consisting, after careful, complete reduction, in the maintained complete relaxation of the muscular tendons of the arm, forearm and hand, of the fascia and ligaments of both superficial and deep flexors of the anterior brachial region, of the pronators, and of the superficial and deep extensors of the radial region, to their tendinous insertions, even of the short and seemingly unimportant muscles and fasciæ of the palmar surface of the thumb, the early, free use of the thumb adding greatly to the early use of the hand The continued maintenance of this relaxation is of paramount importance in connection with the immobilizing of the wrist, the proximal point These essentials are the great recommendations of the "retroflexed splint "

Gray's "Anatomy" furnishes a plain, practical illustration of the muscles engaged in the displacement of the fragments in Colles' fracture, disclosing the acting causes of the biceps, the pronators, and supinator longus, where it is seen the upper fragment is under control of the biceps, lifting the upper fragment further from the ulna, the pronator radii teres drawing the upper fragment inward, the pronator quadratus drawing the lower fragment inward, near to the ulna, the supinator longus, contracting, lifts up the styloid process of the radius, pressing down upon the ulna the lower fragment How readily is the displacing power of these muscles intercepted through the ordinary mode of the flexion of the fore arm on the arm, a simple bend at the elbow, a like bend at the wrist will yield like good

When both bones of the forearm are broken—as when but one—the use of thin, narrow, interosseous pads will exercise a controlling force upon the displacing influences of the pronator quadratus and the supinator longus The continued, strained abduction of the hand on Nélaton's "pistol shaped" splint, if abduction is sufficiently prolonged to produce any tangible effect, presents and exercises an unnatural and uncomfortable condition

Again, splints, to be effective, should immobilize the proximal point, hence, short splints, or even a short palmar splint, and a long, straight dorsal splint, are alike inadequate, for, says Miller (Principles of Surgery), "in fractures of the radius, for instance, unless the wrist be completely commanded, pronation, inevitably causing displacement, ill adapted callus and a weak as well as unseemly limb, will certainly occur " A short splint, extending a little above and a little below the fracture only, says Dr Potts, is not only an absurdity, but a mischievous absurdity The necessity of the greater width of the splint than the encased limb, to obviate consequent depression and displacement of the fragments by the retaining bandage, is a familiar safeguard

The dressing of the fracture is very quickly done, and no removal of the splints is required for the satisfactory examination of the arm Both splints being thickly inlaid with absorbent cotton, having three strips of adhesive plaster at hand, an inch or two in breadth, placing the inside splint along the arm, grasping the hand of the fractured arm with the surgeon's right hand, sufficient traction is made, whilst the left hand retains the inner splint, and feels the fragments in proper apposition—the outer splint is applied, and clasping both splints firmly, a strip of adhesive plaster encircles the splints at the wrist firmly, another at their upper extremity, and another around the hand part of the splints In case of fracture of both bones, an interosseous pad should be invariably applied and can be placed and held *in situ* by the same original grasp These adhesive strips hold firmly the splints, when the retaining bandage may be leisurely applied

It may be noticed that the hand end of the splints admits of slight drooping of the hand, the simple curve of uncontrolled muscular action It will be observed, also, that the angle of retroflexion of the dorsal splint is studiously sharp at the wrist, an angle of about 122°, applying the pressure from the splints only to and upon the extremities of the radius and ulna, carefully avoiding any and all pressure upon the carpal bones This angle should be of degree sufficient to secure complete relaxation of all the posterior muscular tendons above mentioned by the backward bend of the hand, whilst the partial closing of the hand secures the necessary relaxation of the anterior tendons and fasciæ The palmar splint continues on over the muscular prominence of the three flexors of the palmar surface of the thumb, preserving their full unconstraint, whence it dips backward, spreading over the palmar surface of the partially closed hand

While we have invariably, for many years, applied a bandage to every fractured limb previous to the application of the splint, yet would this careful custom, from recent teachings, seem more honored in the breach than in the observance, for, says Dr John H Packard, in the fourth volume of Ashhurst's "International Encyclopædia of Surgery " "In former times a custom of applying what was known as an 'immediate bandage' to a fractured limb, in order, as was supposed, to prevent muscular contraction This custom has now been generally abandoned, although it is still followed by some practitioners, it can never do any good, and may do much harm " Yet, with profound respect to this authoritative source and consideration, an "immediate bandage," loosely and intelligently applied, may do some good in controlling muscular action, and preserving the contour and integrity of the relative anatomical cast and condition of all within its envelopement—a tegumentary supplement In fractures of both bones it were best omitted

The retroflexed splints, then, give a ready, comfortable and effective maintenance of all appreciable, required muscular relaxation of the extensors and flexors, traversing in their tendinous sheaths beneath the anterior and posterior annular ligaments to their ultimate insertion along the phalanges, and relaxation of the muscles and fasciæ of the hand and thumb, and, lastly, may they justly claim an eminent preferment in securing the early, free, and full use of the hand

A CASE OF HYSTERECTOMY

With Practical Remarks on Laparotomy

Read before Indiana State Medical Society, May 11, 1887

BY JOSEPH EASTMAN, M D,

PROFESSOR OF GYNECOLOGY, INDIANAPOLIS, IND

Mrs W, married, aged 35, mother of two children, the youngest 5 years old, consulted me on December 28, 1886, concerning a tumor which she had first noticed about four years previously During the two or three months preceding her visit to my office, the tumor had given her much annoyance, becoming painful and tender, especially at her menstrual periods These complaints were accompanied by more or less hectic symptoms, the temperature running as high as 101°–102° F, with deranged digestion

By the usual methods of examination in such cases I had no difficulty in excluding all but two conditions, namely, multilocular ovarian cyst with very short pedicle, or myoma, soft fibroid of the uterus The uterine cavity measured two inches I advised abdominal section and removal of the tumor, of whatever kind it should prove to be The patient could not consent to be "cut open" during life, but was anxious to have it done *post mortem* At her next period, however, her suffering and debility became so great that she submitted "for her children and husband's sake to make the leap for life"

She was admitted to my private Hospital for Women on February 1, and at once put upon preparatory treatment to reduce temperature, control hectic symptoms, etc In spite of treatment during three days the temperature ranged 100°–102°F The secretions and excretions being good as could be expected, I opened the abdomen on Februray 3, by an incision two inches in length, and plunged a trocar into the tumor No fluid escaped, but a red blush spread over the surface, characterizing a tapped fibroid The incision was enlarged, extending to the umbilicus, the tumor turned forward and out of the abdomen, the broad ligaments were clamped and ligated with cobbler's stitches, then separated by the cautery The pedicle was clamped with Eastman's[1] large temporary clamp

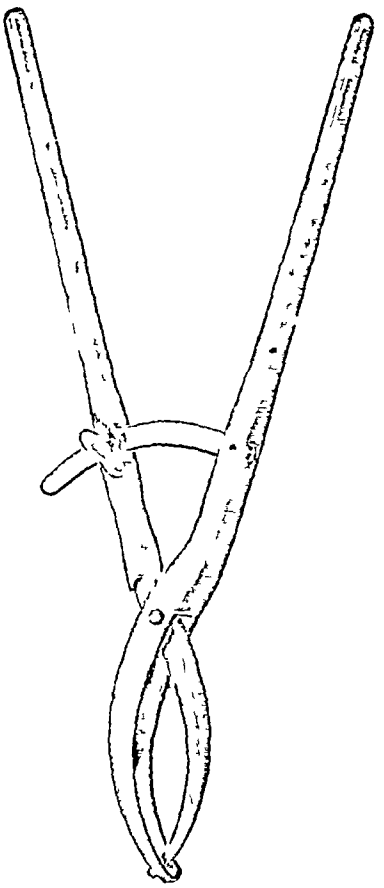
A strong elastic ligature was passed around the pedicle as low as the vaginal attachment, and then it was severed between the clamp and the ligature A cone shaped piece of tissue was cut out of the stump, the apex pointing toward the internal os, the base directed upwards and outwards towards the serous membrane A cautery iron at blue heat was three times passed through the cervical canal from above downwards, for the purpose of destroying mucous membrane and to afford drainage from the interior of the stump A dressing forceps was passed through after the cautery, by the aid of which a rubber tube as large as my little finger, was dragged up to within half an inch of the free peritoneal margin I expected this tube by its expansion to resist shrinkage of the stump The elastic ligature was then removed and over the tube the stump was stitched with number 14 iron dyed silk, the stitches being placed in cobbler's style, three-fourths of an inch from the free peritoneal margin

After ligating the arteries these flaps were brought together by Lembert's suture, it requiring twelve of them The peritoneal cavity having been cleansed, a glass drainage tube was introduced through the opening, into the cul de-sac of Douglass, and then the abdominal wound closed with silk sutures The tumor weighed six pounds

There was little shock, the temperature never reaching above 101° F, except for about one hour, during the action of the first cathartic when it was 102°

REMARKS ON LAPAROTOMY

It will be seen from this report that I used Schroeder's intra peritoneal method of treating the pedicle, with my addition of inserting the elastic tube through the cervix, to expand and resist contraction of the tissues at the seat of the ligatures I should use the



[1] Eastman's clamp as here shown is made in two sizes by Shepard & Dudley, of New York, and has the following advantages

1 It is long enough to enable the assistant holding it to be entirely out of the operator's way

2 It is so strong that there need be no fear of its breaking, whatever force be exerted, purposely, or otherwise

3 It has no complicated machinery to get out of order at a critical moment "The simplicity of an instrument is a measure of its success"

4 No matter how large or how small the object grasped, the pressure is the same at either extremity of the clamping jaws, the latter being so constructed that they will not allow any substance to slip, neither will they cut

5 It will crush a substance as small as a shoe string, or the base of a tumor six inches in diameter This is an advantage where the pedicle is short and more room needed for the ligature

6 It instantly arrests all communication between patient and tumor, so that in striking the peritoneal surface of the tumor can not chill the patient and cold blood returning from the veins is an important source of shock

7 It instantly arrests all escape of arterial blood, which is sometimes great when we have broken up the partition walls of a cyst to reduce its size, and

8 As in this case, where the pedicle includes the uterus at the internal os, it clamps it so as to reduce the mass more than one half

same method again, giving free drainage, not only because the result was good in this case, but because I believe where it can be done it is the ideal method Keith and Bantock admit that this is the true method Yet at the same they get the best per cent by fastening the pedicle outside Schroeder, I believe, at the time of his death had some unpublished statistics, showing a lesser mortality by his intra peritoneal mode Formerly the subserous variety of fibroids, with pedicle, were the only ones admitting of radical cure by surgical means Now we make an abdominal incision and remove the *subserous* variety by enucleation or hysterectomy, in cases where emergency demands it

I admitted before this operation that I did not know whether I had to deal with a cyst, or a myoma Tait says the differential diagnosis is extremely difficult In a conversation with Dr John Homans at his private hospital in Boston, on the second day of this month, (May), he said "It can not be done" I fully agree with his opinion as expressed, especially when, as in my case the uterus could be well defined by rectal and vaginal exploration, the soft myoma enabling the sound to move the uterus without any perceptible movements of the abdominal tumor

This case teaches this lesson That exploratory incision is warranted when the diagnosis can not be clearly made out, (and our most experienced abdominal surgeons admit we can never do it with certainty) provided he who does it is fully prepared to do *any* operation known to the surgery of the abdomen, and is able to care for his patient afterwards according to the most approved methods to detail and provide the same surroundings for his patients as do those operators whose increased personal experience and success has given them such a low mortality that they unhesitatingly publish their death roll along with their successful cases

Dr Thomas, after an experience yielded by seven or eight hundred cases, approximately, extending over a period of twenty years, feels that he can say with truth that he has never once regretted opening the abdomen, and that he has in a dozen cases deeply regretted not having done so He thinks it certain that in the future exploratory abdominal incision will become the rule in all cases of the following conditions which do not yield to medical means, and concerning which the etiology is in great doubt 1 Wounds and injuries of the abdominal viscera, 2 Intestinal obstructions, 3 The presence of stone in the bladder or kidneys, 4 The accumulation of blood, pus, or serous fluid from any source, 5 The existence of a neoplasm in any part of the abdomen, 6 The occurrence of serious organic changes in certain of the viscera of the abdomen, such as the kidneys,the spleen, the uterus, the Fallopian tubes, or ovaries, 7 Ectopic gestation

This noted abdominal surgeon has completely cured a humber of aggravated cases of ascites, after tapping had been repeatedly resorted to, and all hope of recovery given up He feels "justified in assuming the position that in cases of ascites in the female, before the patient has been subjected to the usual practice of repeated tapping with its universally bad results, the most thorough investigation as to the existence of small neoplasms as pathological factors should be made, and if signs of their existence be found, exploratory incision should be made with the folorn hope that relief might be obtained

I can cite two cases of my own, where exploratory incision as a means of diagnosing abdominal tumors, might have been the means of saving two lives 1 A lady of Peru, Ind , under the care of Drs Brinton and Higgins at the time I saw her, had consulted two very eminent operators before consulting me Each insisted that the sound passed ten inches into the uterus, and that therefore it passed into the enormous tumor which distended her abdomen from the pubes to the ensiform cartilage, and hence nothing could be done She had been tapped once and three gallons of fluid drawn from her abdomen During six years she sought the best advice with the view of an operation When I saw her she was already poisoned by sepsis, pulse 140, temperature 103° F I was asked to make an exploratory incision I found a tumor weighing about 23 pounds, displacing the pelvic viscera, and in an advanced state of decomposition It was subserous, pedunculated When I seized it with my hand, my fingers pierced it, dragging away a rotten piece with pus dropping from it as I lifted it up She lived only twenty four hours If an exploratory incision had been made only *one* year before, this life might have been saved, for the pedicle was small and the uterine cavity not deeper than four inches The tumor was exhibited to the Marion County Medical Society, 1885

2 A lady of Hamilton County, Ind , had been cared for by a physician of Noblesville I was asked to see the case with Dr H S Herr, Westfield, Ind We found a distended abdomen suggestive of ascites No operation was made Death occurred soon after I saw her Post mortem determined that the cyst had ruptured, probably six months before death, since the abdomen had been that long distended No doubt was felt that, had an exploratory incision been made in proper time, the patient would have had a fair chance of recovery I cite these two cases in confirmation of Dr Thomas's views of exploratory incision

Dr R S Sutton, of Pittsburgh, the Tait of America, speaks in the following terms of exploratory incision "Make a clean cut down to the peritoneum, divide or tear the latter after making a small opening in it, as one's fancy runs Introduce the requisite number of fingers or the hand, turn out the intestines on a clean towel, look them over for wounds or obstructions, examine a tumor, or tubes, or ovaries, or uterus, or bladder, liver, kidney or spleen Having done carefully, clean out the cavity with gentle sponging or irrigation, carefully return the viscera, carefully close the wound if all has been left clean and the cavity of the peritoneum dry I say, you have done nothing that will kill your patient, but you have cleared up the case, possibly saved a life These measures must be observed if success will follow such practice And when this practice obtains, fewer people will die and fewer will be hanged for

killing them with pistols and knives and dirks People who die now for want of an ante mortem examination will be spared the post mortem, which rarely does the patient any good Such scenes as a hospital staff turning away from a woman dying from the twisted pedicle of a large ovarian cyst will be no more Such practice as is witnessed when a doctor sits by and gives opium till the post-mortem reveals the fact that an intestine was shot or stabbed through, or that an obstruction killed the patient, will vanish "

He thus discusses who should do the work "The best law any practitioner can lay down for himself and his patient in abdominal work is this If you can't do a radical operation under proper precautions, do nothing The patient should be sent to some one prepared for and capable of doing the work In Europe and Great Britain, this rule prevails practically, and hence prominent operators get many cases, and it is from these men that the improvements in abdominal surgery have emanated Simple bush whacking in abdominal surgery is a very poor way to make a reputation All such cases done in a lifetime will rarely exceed a dozen, and if this dozen comprise all the experience the operator gained up to the time of his demise, it has done humanity very little good When the work in this country is put out to the men prepared to do it, and the cases are not bungled from the start, then we will have just as good results as are found abroad When men who have not had special clinical training in abdominal surgery cease to do it, and act for the good of the patient, rather than for something else, then this branch of surgery will do well in this country The present range of abdominal surgery is very extensive The liver, gall bladder, spleen, kidneys, urinary bladder, intestines, ovaries, tubes and uterus are all, under diseased conditions, successfully attacked "

Mr Tait says on the same subject "What I fear, in fact what I already feel, is that the remarkable success which I have had, and of which Prof Byford speaks in such strong terms, is really leading astray those whose opportunities have not been as my own, into the belief that the work is simple, easily acquired, and free from risk It is not so, and unless those who practice it choose to follow me in the rigid precautions and the immense care I give, not only in the mere performance of the operation, but in the surroundings of my patients and to every detail in connection with them, they will not obtain, they must not expect, the success which I have had I have said that I fear, in fact I already feel, that this success of mine is leading people astray, and I want to urge in the name of humanity, as well as for the sake of the art we practice, that there should be less of the indiscriminate rushing into this kind of work which has already been deplored on both sides of the Atlantic "

Indiana women are as worthy of successful abdominal surgeons as are those of any other part of the world Let us remember, then, that those who have placed laparotomy on a solid foundation, were men who had more or less completely abandoned the general practice of medicine, some of them at a great sacrifice, that they might secure that prime element of success in abdominal surgery, a large personal experience in the work Booth would not think of playing Hamlet with new supports each time So those who have published statistics, bad as well as good, demand that their patients shall have specially drilled attendants, whose increased personal experience in the work is a wonderful supplement to the skill and experience of the operator

Dr Sutton has recently published all his abdominal sections including his death roll Dr Goodell comes out annually with his "Year's Work in Ovariotomy," always giving his death roll Dr Wylie is publishing his work with its necrology Dr Homans prints 260 odd operations, embracing fatal cases I visited these men recently and saw them operate They are specialists They are doing for America what Wells, Keith, Bantock, Martin, Schroeder and others did for the statistics of the old world I here report my

TWENTY FIVE CASES OF ABDOMINAL SECTION WITH TWENTY RECOVERIES

In the accompanying table, cases 1, 2, 3 and 4 were reported in Transactions of Indiana State Society, for 1884

Case 5 died from erysipelatous peritonitis, in the City Hospital on the fifth day after the operation The hospital had been built less than one year, still a case of erysipelas had been treated across the hall, only a few days before the operation I was informed of this at the post mortem examination of my patient

Case 6 died in about twenty-four hours after our efforts, from shock She had a violent attack of general peritonitis, in February preceding the operation, from which she came near losing her life After this, the tumor grew rapidly, the operation being a last resort The words yes, under the word recovery, renders comment unnecessary, except that cases 7, 8 and 9 were reported to the Indiana State Medical Society for 1885, and that my reports of work there have encouraged some practitioners to urge earlier operations, and stop tapping, thus insuring better success, and the success removes, to some extent, the fear, heretofore felt by patients in this state, that an ovariotomy was almost sure death Others heretofore silent, on the subject of abdominal surgery, have presented the subject to State and county societies This will aid in educating doctors and patients to the fact that the time for a successful ovariotomy is before the forces of death, plus the operation are stronger than those of life

Case No 20 was really the subject of an exploratory incision, to differentiate between a pelvic abscess and an encephaloid mass It proved to be the latter, the tumor sprang from the left ovary, filled the pelvis, and completely surrounded the rectum, making defecation extremely difficult The growth was not disturbed except to get a fragment for microscopic examination It proved to be typical encephaloid cancer The wound, five inches in length, healed perfectly She recovered *entirely* from the operation, but the rectum completely closed, her death occurring two weeks from the date

TWENTY FIVE CASES OF ABDOMINAL SECTION, WITH TWENTY RECOVERIES

Number	Residence	Medical Attendant	Age	Married or single.	Disease	Operation	Date	Hospital	Private	Recovered	Died
1	Carters Station	Dr Sellers	43	M	Ovarian cyst, 30 lbs	Left ovary removed	Nov 17, 1883		Yes	Yes	
2	Loogoota Ind	Brittain	25	M	Malignant.	Right ovary removed	Dec 20, 1883		Yes		Yes
3	Indianapolis	" Maxwell	18	S	Ovarian cyst	Left ovary removed	April 5 1884	Yes		Yes	
4	Southport Ind	" Graydon	44	M		Left ovary removed	April 12 1884		Yes		Yes
5	Crawford s V Road	" Eastman	35	M	Parovarian cyst	Both ovaries removed	June, 1884	Yes			Yes
6	Albany Ind	" Murray	19	S	Cancerous tumor, 25 lbs	Left ovary removed	June 1884		Yes		Yes
7	Indianapolis	" Eastman	24	S	Ovarian	Ovaries and tubes rem'd	October 23 1884		Yes	Yes	
8	Crawfordsville	Irwin	26	S	Cystic degeneration	Rem of both tubes & ov	October 26 1884	Yes		Yes	
9	Sullivan	Prof Parvin	22	S	Metrorrhagia		March 4 1885	Yes		Yes	
10	Sharpesville	Dr Heath	36	M	Ovarian cyst 20 lbs	" "	July 18 1885		Yes	Yes	
11	Indianapolis	C H Abbett	22	S	Ovarian cyst 12 lbs	" "	Sept 19 1885		Yes	Yes	
12	Brazil, Ind	' T F Smith	35	M	Cystic degeneration	" "	Sept 29, 1885	My own private hospital		Yes Yes Yes	
13	Hope Ind	Boynton & Houghley	42	M	Pyosalpinx	" "	Nov 24, 1885	"		Yes	
14	Indianapolis	Dr Miller	24	S	Cystic degeneration	" "	March 12 1886	"		Yes	
15	Brazil	' J F Smith	30	M	Dermoid cyst	" "	Dec 31, 1885	"		Yes	
16	Indianapolis	' A J Smith	32	M	Salpingitis	" "	May 17, 1886	"		Yes	
17		G W Vernon	57	M	Ovarian cyst, 20 lbs	Right ovary removed	May 24 1886		Yes	Yes	
18		' A S McMurray	33	S	Cystic degeneration	Both ovs and tubes rem	August 5 1886	"		Yes	
19	Zionsville	' Duzan	23	S	' "	"	August 12 1886		Yes		
20	Indianapolis	' Wright	49	M	Enceph cancer of left ov'y surrounding rectum	Exploratory incision	Sept 9, 1886		Yes	Yes	
21	Orangeville	' Shirley	38	M	Congenital defect of right ovary and tubes	Both ovs and tubes rem	Sept 17, 1886	"		Yes	
22	Indianapolis	" Blu	35	M	Fibr tum of uterus 26 lbs	Hysterectomy	Feb 3 1887	"		Yes	
23		" Maxwell	27	M	Salpingitis et ovaritis	Rem of ovaries & tubes	Feb 24 1887	"		Yes	
24	'	" Eastman	27	M	Ovarian tumor	Rem tum and rt. Fal t	March 22 1887	"		Yes	
25	Peru	' Higgins		M	Fibroid	Removal of tumor	May 4, 1885	Yes			

of the operation I consider an exploratory incision worthy of record as, in my opinion, it will, in expert hands, be a useful aid in diagnosis, and enable us occasionally to save a human life

This report includes all my abdominal sections, for ovarian diseases My statistics are like those of most operators, *i e*, improved by increased personal experience My experience has been supplemented by that of Miss Clementia M Prough, the nurse who manages my private hospital, and has had charge of the after treatment of my last fifteen cases True, I saw the operation many times before doing it myself, but it is like the juggler who keeps six balls in the air at a time—it looks simple Try it, you will let a few drop Sufficient time has not yet elapsed to determine the *cure* in some of the cases where I removed small ovaries and tubes I have, however, photographs and letters from some of them who were confirmed invalids, which are to me most gratifying, especially considering the fact that our text books, written only a few years ago, consigned these sufferers to a life of incurable invalidism

Your honored president, Dr Kemper, suggested to me yesterday, that the laity were not yet educated to the advantages of early operating, or to the danger of death from delay I replied that the published statistics of men specially equipped for the work, a larger experience by the few and fewer operations by the many, will in America, as in the Old World, show such a low rate of mortality that women will no longer defer an operation, but will accept it early, at the hand of the specialist For, despite reckless operating, and more reckless, almost criminal inexperience of those who conduct the after-treatment of some cases, I predict that this century will close honoring abdominal surgery for its marvelous achievements, not only as the crowning glory of all surgery, but of all science, and all art

197 North Delaware Street, Indianapolis, Ind

MEDICAL PROGRESS

VASELINE IN THE HYPODERMIC INJECTION OF ANTISEPTICS —MEUNIER, of Lyons, considers vaseline as diffusing itself very rapidly through all the tissues of the body, its diffusibility varies inversely with its consistence, which may be that of a perfect liquid or that of wax, it preserves its diffusibility when holding in solution a microbicide Antiseptics dissolved in vaseline, when injected beneath the skin or applied upon a wound or a mucous surface, are diffused without exciting pain or reaction, provided that the substances used be pure and in doses which can be tolerated, the dose and consistence of the dissolvent must be varied according to the organ treated

The method of treatment is as follows Among the antiseptics used in these experiments upon animals were carbon bisulphide, carbolic acid, camphor, iodoform, thymol, essence of cubebs, oil of santal, copaiba, oil of cinnamon, turpentine, thyme, eucalyptus, mint, kousso, and most of the vegetable alkaloids After these solutions had been tried successfully upon animals, they were employed upon men These are the formulæ

Eucalyptol (pure), 5 parts,
Chemically pure vaseline, 20 parts by weight

The injections are made upon the outer side of the thigh The dose tolerated varied from 15 minims to 3¾ drachms and more, daily

Eucalyptol (pure), ɱlxxv,

Iodoform,	℥iv,
Vaseline (pure),	℥x

The dose tolerated is the same as for the first mixture

Carbon bisulphide,	℥xv,
Vaseline (pure),	℥iv¾

Of this mixture, 15 to 30 minims, and more, can be given daily, provided small doses are used

Turpentine, pure (prepared after the method of Berthelot),	℥lxxv,
Vaseline (pure),	℥v

From ℥xv to ℥iiss may be given daily

It is of the utmost importance that these substances should be chemically pure, and that they be given with the greatest accuracy in measuring the doses All impure vaselines turn black in contact with sulphuric acid Most samples of commercial vaseline give the following reaction When saturated with the purest carbolic acid and slowly heated, it becomes rose colored, but deposits a violet precipitate The intensity of the violet color of the precipitate increases on the addition of alcohol, and the color, which is probaly aniline in its nature indicates the presence of nitrogenous impurities which are dangerous, the abundance of the precipitate is in proportion to the amount of impurity present In every test made pure vaseline did not give these reactions, and also gave no pain or reaction when injected into animals Among antiseptics the essences are nearly all impure For example, commercial essence of eucalyptus has a strong odor, an acrid taste, an acid reaction, and boils at 80°, its active principle, eucalyptol, which boils at 175° (Cloez), forms only a third or a half of the commercial article The same is true of turpentine and its essential element, and of other substances mentioned Almost all essences contain resins which should not be introduced into the economy When these articles are mixed with pure vaseline these resins are precipitated, and may be separated by filtration Pure eucalyptol is not precipitated by vaseline To prepare for injection, these antiseptics should be thoroughly shaken with the pure vaseline, allowed to stand, and filtered through two Berzelius filter papers

Experiments upon animals with these solutions were made in the treatment of the following diseases fistulous, fungous, tuberculous, and cystic tracts, favus, herpes tonsurans, alopecia, psoriasis, eczema, acne, and venereal lesions albugo, granular eyelids, glaucoma, puerperal fever Animals were also treated for anthrax, scab, farcy, and tuberculosis, general and local In all the trials made albuminuria was never produced, even when a temperature of 104° F was reached and large doses were given Among many interesting and important observations made was the injection into the lung of a horse of ℥v of a solution of eucalyptol, ℥v of a solution of bisulphide of carbon, without unfavorable reaction, 10 drops of eucalyptol solution were injected into the eye and windpipe of a rabbit, 15 drops into the eye of a sheep, ℥iss under the skin of a horse Pure vaseline was injected in the following heroic doses under the skin of a horse weighing eight hundred pounds

First injection, ℥viss
Second injection, ℥xiv four hours after the first
Third injection, ℥ix ten hours after the second
In all, one kilogramme (about two and one fifth pounds) in twenty four hours

The whole was well borne by the animal, more could have been tolerated, the best point or injection was at the animal's side, diffusion was instantaneous when the point of injection was rubbed with the hand

Regarding the use of impure vaseline, a case is cited in which the injection of ℥xv of impure vaseline, injected into the arm, resulted in phlegmon and the formation of a pint of pus These solutions are also appropriate for the making of antiseptic dressings and the surgeon can thus make for each case the appropriate dressing, as the circumstances of the case indicate —*Bulletin Général de Therapeutique*, January 15, 1887 —*Therapeutic Gazette*, April 15, 1887

CHLOROTIC ANÆMIA —In a paper on this subject DR JAMES KING CROOK summarizes as follows

Our knowledge of the pathological features of chlorosis may be expressed as follows The disease may be said to consist in a temporary arrest of hæmatopoiesis, without fixed or well defined organic changes in the cytogenic, circulatory, or reproductive apparatus The true histological substratum of the disease consists in a loss of the hæmoglobin of the blood This loss is due less to a numerical destruction of the red blood-globules (oligocythæmia) than to a diminution of the hæmoglobin value of the individual corpuscles (oligochromæmia) The remaining constituents of the blood are unchanged

Concerning the causation we may say that this is *par excellence* a disease of puberty, and is intimately associated with the development of the reproductive organs at this period The nature of this connection is not perfectly understood in our present state of knowledge It occurs most frequently in the previously feeble and delicate, and its development is facilitated by imperfect nourishment and pernicious hygienic surroundings

The principal symptomatic phenomena consist of a more or less intense pallor of the superficies, cardiac palpitation and dyspnœa, neuralgia in various situations, headaches, and other neuropathic manifestations The diagnosis rests upon the foregoing symptomatic features, conjoined (in most cases) with certain auscultatory signs in the heart and great vessels, consisting of the *arterial systolic bruit* and the *venous hum* Graver forms of blood disease are excluded by the absence of pyrexia and splenic or lymphatic enlargement

The treatment of chlorosis consists in placing the patient under as good hygienic conditions as possible, in the observation of a nutritious regimen, and especially in the administration of large doses of iron The curative value of ferruginous preparations has been amply attested both by clinical experience and experimental research Other symptomatic indications which may arise are to be met as occasion requires —*N Y Medical Journal*, June 11, 1887

THE
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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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THE AMMONIA TREATMENT OF FEVER

Our readers will remember that in THE JOURNAL of October 10, 1885, we called attention to a paper by Dr S K Jackson, of Norfolk, Va , on the *Ammonia Treatment of Typhoid Fever*, in which this treatment was based on the idea that the most important therapeutic indication in typhoid fever was to supply nitrogenous waste Still more recently was published, in THE JOURNAL of December 11, 1886, a paper by Dr J R Barnett, of Neenah, Wisconsin, entitled *Salicylate of Ammonium in the Treatment of Typhoid and Septic Fevers and Inflammations* His conclusions are too many and long to be repeated here, but his paper, as well as that of Dr Jackson, will repay another reading in connection with the latest contribution to the subject, a paper read by DR J D SULLIVAN, of Brooklyn, before the recent metting of the Fifth District Branch of the New York State Medical Association, on the *Therapeutic Effects of Ammonium Salicylate* Being favoraby impressed with the theories and results presented by Drs Jackson and Barnett, Dr Sullivan determined to give the ammonium salicylate a careful trial

The first case in which he had the opportunity of doing this was one of typhoid fever in a young man He found him presenting a suffused countenance, furred tongue, dry skin, and temperature at 102°, with tenderness over the abdomen and the general characteristics of a case of typhoid fever, the diagnosis of which was further strengthened by the fact that it had occurred in a neighborhood in which Dr Sullivan had a short time previously attended six undoubted cases of the disease After evacuating his bowels with a small dose of calomel, to which was added one grain of powdered ipecac, he prescribed gr viij of salicylate of ammonium, in a solution of glycerine and water, every four hours On the next day he found the temperature reduced to 100°, the skin moist, and the general condition of the patient somewhat improved On the following day the improvement was more marked, and the ammonium salicylate was reduced to gr viij four times a day He continued to improve daily, and on the fifth day of his attendance Dr Sullivan found him dressed and sitting up, nor could any amount of persuasion induce him to return to bed His temperature was normal, and he complained of nothing but weakness He continued to take the remedy in the same dose three times a day, in addition to a tonic containing quinine, and improved so rapidly that within two weeks from the time of the doctor's first visit he was able to return to his business In commenting on this case Dr Sullivan remarked that, while it was well known to the profession that mild cases of typhoid fever are occasionally met with which run a comparatively short course, he could but feel convinced that in this instance the disease was favorably influenced by the special remedy employed While he did not expect to meet with equally good results in every case of typhoid, he thinks that the ammonium salicylate will prove a valuable agent in typhoid fever

In six cases of facial erysipelas he has used it with very gratifying results The temperature was invariably reduced by its administration, and the course of the disease so modified that its beneficial effects were quite evident In all these cases the disease subsided in from four to seven days Among other cases in which he has employed it was one of septic cellulitis of the arm, with profound constitutional disturbance The patient was a butcher of robust physique, 49 years of age The trouble originated from a slight wound on the posterior aspect of the ring finger of the right arm, and about a week after it was received he noticed a painful sensation in the arm, for which he consulted Dr Sullivan On the ulnar surface of the forearm there was found a subcutaneous circumscribed swelling, quite tender on pressure, but free from redness or any discoloration Soon after leaving the doctor's office he was seized with a violent chill, which continued for nearly an hour, and was followed by high fever, with extreme restlessness and anxiety of mind During the next twenty four hours his temperature ranged from 104° to 105°, although he was cinchonized with quinine, which was administered freely with small doses of morphia In the meantime the swelling in the arm had extended very much and assumed an erysipelatous appearance

He now became quite delirious, vomiting set in, and the case assumed a very serious aspect Under these circumstances the use of quinine was suspended, and salicylate of ammonium was ordered in 8 grain doses every two hours After the fourth dose a copious perspiration was induced and the temperature fell to 102°, and he became comparatively comfortable In consequence of the improved condition the remedy was now given less frequently, but he still continued to take it regularly, and under its use the case progressed almost uninterruptedly toward recovery

Dr Sullivan also refers to the use of the remedy, with illustrative cases, in puerperal septicæmia, the third stage of phthisis, diphtheria, dyspepsia with fermentation, infantile diarrhœa and croupous pneumonia, and draws the following conclusions

Ammonium salicylate is certainly a very effective antipyretic It will not reduce temperature as rapidly as antipyrin or antifebrin, but the antipyretic effect is more lasting than that produced by either of these agents

In certain diseases of septic origin it exerts a curative action by tending to retard, and possibly inhibit, the development of septic elements in the system

I cannot agree with Dr Barnett that it is stimulating From my own experience I am inclined to believe that in large doses, or in moderate doses continued for a long time, it has a decidedly depressing effect upon the heart and respiration, but this depression may be obviated by administering it in combination with the aromatic spirits of ammonia

It has an irritating action upon the kidneys, and consequently should not be given in scarlet fever, or in any case in which these organs are not in a healthy condition

It has been my custom to prescribe it in from gr viij–x doses every two to four hours during the first day, then at longer intervals as the requirements of the case may indicate In some cases ʒss given in divided doses during twenty four hours will produce decided ringing in the ears, others will take ʒj in the same time with but little disturbance To children of about 3 years of age I usually administer it in gr ij doses every four hours

RATHER MIXED

The Editor of the *Independent Practitioner*, devoted to Dental and Oral Science, in his comments on "Medical Recognition," in his August number, gets some things so mixed as to suggest the inquiry whether the season of unusual summer heat has not disturbed his cerebral circulation

He commences by copying the *resolution* adopted at the recent annual meeting of the American Medical Association, defining the conditions on which those practicing the special department of Dental and Oral Surgery can be recognized as members of the regular medical profession, and after a few lines of approval, he makes the following singular statement, "*The resolution positively announced* that the possession of such a diploma would entitle its holder to admission to the International Medical Congress" Inasmuch as the resolution, which appears to have been directly before him, not only contained no such *positive announcement*, but actually makes no allusion, either directly or indirectly, to the International Medical Congress, it is difficult to account for such an assertion Yet his next sentence is no less erratic He says "We were not certain that the authority of the American Medical Association to establish *new degrees* in medicine would be respected by all the world, or that its right to modify the rules of admission to a Congress with which that Association had really nothing to do, would be acknowledged by foreign members, etc"

If our readers will turn to the number of the JOURNAL for June 25, 1887, Vol viii, p 722, where the resolution and the action of the Association thereon are recorded, they will seek in vain for the slightest allusion to the establishment of any "new degrees in medicine," or to any modification of the rules of admission to the International Medical Congress whatever And, if it will help to calm the fears and remove the doubts of our editorial *confrère* we will assure him that the resolution which was adopted by the American Medical Association, was not hastily drawn, nor was it brought forth to meet some temporary emergency relating to some Congress, nor yet to serve the interests of any clique, school, or party Its author commenced a quarter of a century or more since, to publicly advocate such measures as were best calculated to reclaim the diseases, deformities and injuries of the teeth and their appendages as a part of the general field of medicine and surgery, and to so educate the dental practitioners as to enable them to take their legitimate place within the ranks of the medical profession The good work progressed so satisfactorily that at the meeting of the American Medical Association in May, 1881, he had the pleasure of uniting with Dr Lewis A Sayre in seconding the motion made by the honored S D Gross to establish a Section of Dental and Oral Surgery on the same basis as the other Sections of that body And being satisfied that the favorable time had arrived, he carefully pre

pared and presented the resolution which was adopted at the meeting of the Association in Chicago in June, 1887, as a fair, safe and practicable method of facilitating the completion of the work of placing the special department of dental and oral science and practice where it legitimately belongs within the domain of medicine and surgery And we hope the editor of the *Independent Practitioner* will waste no more time in looking for some cat under the meal, or in trying to connect a measure which related exclusively to the interest of Dental and Oral Surgery in this country with the International Medical Congress, the terms of admission to which had been fixed two years before and were mainly founded on the precedent afforded by the London Congress of 1881

MR TAIT AND THE GERMAN LANGUAGE

In a recent address on the germ theory and advances in abdominal surgery, MR LAWSON TAIT, indulges in some rather severe strictures on the germ theory, which, with the German language, seems to trouble him not a little It will be remembered that Dr Sanger recently advised Mr Tait to learn German and read the works of German gynecologists Mr Tait says "Unfortunately for me, that is just what I did some twenty years ago, with infinite labor, for the language is neither simple nor easy I have long been convinced that my time in this respect was thrown away " From this it would seem that Mr Tait's knowledge of the German language is as faulty as his pathology Again he says "The German mind, at least the German medical mind, is essentially different from the mind of the Briton It not only evolves from its own consciousness descriptions of things other than the proverbial camel, but it so wraps up its grain of wheat in such a bushel of chaff that the labor of getting a meal is intolerable Nothing pleases it so much as metaphysical speculation, while we, on the contrary, are eminently pragmatic " From this it will be concluded by one acquainted with German medical literature, that Mr Tait has allowed his knowledge of the German language, acquired by infinite labor, to lie fallow since he gained it twenty years ago We do not wish to detract from the practical, pragmatic mind of the Briton, but it must be fairly said of the German mind that it is about as unceasingly pragmatic as anyone could wish We can refer Mr Tait to many German books and articles, hundreds of them, from which he can obtain many a hearty meal of "clean wheat," provided he retains his laboriously acquired knowledge of German And from the frequency with which German writers are referred to in British medical literature we must conclude that his opinion is not shared by many of his countrymen

SINGULAR MODE OF BANKRUPTING THE TREASURY

"It is time for plain language on the *Journal* question With every advantage in its favor *it has bankrupted* the Association's treasury "—*Medical Standard*, June, 1887

The Treasurer of the Association in June, 1883, before a number of THE JOURNAL had been issued, reported the total receipts into the treasury for the year to have been only about $5,000, and the balance then on hand only $903 93 After four years of publication of THE JOURNAL the same treasurer reported the total receipts for the year ending June 1st, 1887, to be $21,723 22, and the balance on hand without a dollar of indebtedness, $1,403 77 by which the Association was enabled to appropriate $1,000 in aid of the Ninth International Medical Congress and yet leave a cash balance in the treasury of $403 77, to which should be added accumulated capital in THE JOURNAL printing office of $1,058 56 We agree with the *Medical Standard* that "it is time for plain language on THE JOURNAL question," but it is also quite as urgently important that the *language* should be as *truthful* as it is *plain*

SANITARY CONVENTION AT TRAVERSE CITY, MICH

Arrangements have been completed for holding a Sanitary Convention under the auspices of the Michigan State Board of Health, at Traverse City, Mich , on Wednesday and Thursday, August 24th and 25th, 1887 At each session of the convention there will be addresses or papers on subjects of general interest pertaining to public health, each paper to be followed by a discussion of the subject treated The public are cordially invited to attend

THE BLANK FORM OF APPLICATION for registration as members of the Ninth International Medical Congress will be found on advertising page 10 of this number of THE JOURNAL Those wishing to be registered in advance of the meeting can fill the blank fully and plainly and send it with the fee, $10, for American membership, to J M Toner, M D , 615 Louisiana Avenue, Washington, D C

AMERICAN RHINOLOGICAL ASSOCIATION — The fifth annual meeting of this organization will be held

in Washington, D C, September 1st, 2d and 3d, 1887 A full programme of papers and topics for discussion has been arranged for the occasion J A Stucky, M D, Lexington, Ky, is president, and P W Logan, M D, Knoxville, Tenn, secretary

SOCIETY PROCEEDINGS.

AMERICAN OTOLOGICAL ASSOCIATION

Twentieth Annual Meeting, held on Tuesday, July 19, 1887, at the Pequot House, New London, Conn

The Society was called to order at 10 30 A M by THE PRESIDENT, DR J S PROUT, of Brooklyn

The report of the Committee of Conference with reference to the formation of *A Congress of American Physicians and Surgeons*, was adopted

DR H KNAPP, of New York, read a paper on

THE EXAMINATION OF THE POWER OF HEARING AND HOW TO RECORD ITS RESULTS

This was the report of a committee consisting of Drs H Knapp, J S Prout and D B St John Roosa The tests for hearing described were the watch, the voice, Politzer's acumetre and the tuning fork The watch is one of the best means of testing the hearing A low ticking watch is of service in indicating the lowest degree of hardness of hearing in those cases where the patient has not become aware of the defect This is, however, not sufficient to measure the higher degrees of deafness In these cases a loud ticking watch or Politzer's acumetre must supply its place Each of these instruments must be tested by the physician in his office on a number of normal ears in order that he may obtain a standard It is a fact that in persons over 55 years of age, a low ticking watch may not be heard when placed over the temporal or mastoid bone if the ear is closed, but will be heard if the ear is open

With reference to the voice, as tests for hearing the whispered voice, the voice of ordinary conversation and the loud voice are used Each observer must test his own voice by the acuteness of hearing of normal persons between the ages of twenty and forty-eight years of age The state of the room as to noise and quiet should always be considered The tuning fork over all parts of the skull is heard louder and longer when the ear is closed than when it is open All tuning forks are heard longer by air conduction than by bone conduction Low tuning forks are heard louder but not longer by bone conduction than by air conduction Departure from these conditions indicate disease

DR SAMUEL SEXTON, of New York It seems to me that sufficient importance has not been given to the varying conditions of the patients themselves I find that in cases of chronic catarrhal inflammation of the middle ear, and also in acute forms of inflammation that there are constantly varying changes in the tension of the drum and in the transmitting mechanism

DR D B ST JOHN ROOSA, of New York I am not inclined to lay such stress as has been done on the variations in hearing from hour to hour in cases of chronic inflammation of the middle ear These variations do occur in cases of disease of the middle ear, but I think they are more marked in disease of the internal ear

DR SAMUEL THEOBALD, of Baltimore As bearing upon the use of the tuning fork, I would mention an observation which I have made in a number of instances and which I have been unable to explain I have noted in certain cases that when I have placed the tuning fork on the vertex the patient will hear it louder in one ear, say the right Then striking the fork again and placing it upon the forehead it will be heard best in the left ear This has given me less confidence in the tuning fork as a differential test between middle ear and labryrinthan troubles

DR H KNAPP In certain cases of chronic catarrh you get no change in the hearing power by any test In these cases I think that nothing is to be looked for from treatment Where, however, by changes of weather or changes in the patients condition, there is a change in the hearing power, we know that there is something to improve We get not only an estimation of the condition, but we also get a foundation for prognosis and an indication for treatment

DR CHARLES H BURNETT, of Philadelphia, reported a case of

SUCCESSFUL REMOVAL OF AN EXOSTOSIS FROM THE EXTERNAL AUDITORY CANAL BY BONE FORCEPS AND CHISEL

The patient was a physician about 30 years of age, in whose right ear the exostosis had been growing for fifteen years and within the past year it had entirely occluded the meatus and caused deafness The growth was about one centimetre in diameter pedunculated and attached to the anterior wall of the meatus just within the outer edge of the tympanic bone Its outer surface was covered with thick and rather insensible skin After a hypodermic injection into the concha of fifteen minims of a 3 per cent solution of hydrochlorate of cocaine, the outer surface of the exostosis was seized by specially devised bone forceps and a piece of the bone tumor cut off About one half the growth was thus removed in successive pieces As the blades of the forceps could not enter further into the meatus and get hold of the remnant of the exostosis, a small chisel a few millimetres in width was placed against the attachment and a blow from a hammer on the chisel knocked off the remainder of the growth *en masse* The operation caused very little pain or bleeding The fundus of the canal and the membrana tympani were covered with a glove finger cast of epithelium This was removed and the hearing found to be normal The ear was dressed with a little iodoform and stopped with cotton There was no reaction and the cut surface of bone on the wall of the meatus at the point of attachment of the exostosis was entirely covered with skin in two or three days Usually drills impelled by the dental lathe have been used to open

the lumen of the canal occluded by exostosis The novelty in this case consisted in the use of bone forceps devised by the author to remove the growth as far as possible and then the use of hammer and chisel to complete the opening

Dr H Knapp had taken considerable interest in the removal of exostosis from various canals To attack them at the apex with the chisel where they consist of ivory bone is most difficult The most efficient way in my experience is to attack them at the base Here the bone may be much softer In the after treatment cleanliness and antiseptic precautions are of the utmost importance

Dr D B St John Roosa read a paper on

THE DIFFERENTIAL DIAGNOSIS BETWEEN AFFECTIONS OF THE MIDDLE EAR AND THOSE OF THE LABYRINTH

There has been some difference of opinion as to our ability to differentiate between affections of the middle ear and those of the labyrinth Many cases usually classed under affections of the tympanum, should be placed among disease of the cochlea or of the acoustic nerve The records of seven recent cases were given in detail These cases were nearly all in the middle period of life when its cares and troubles are most pronounced Such patients often exhibit symptoms of nervous exhaustion These cases may be benefitted by the administration of strychnia, arsenic and quinine Proper hygiene should be employed The universal use of the watch as a test of hearing occasionally leads to false conclusions on the part of the general practitioner who discovers loss of hearing by testing with the watch alone When used alone I regard the watch as insufficient When both the watch and the voice are heard badly there is cause for anxiety Many persons have lesions which cause them to hear the watch and certain other tones badly who can hear the voice well In the opinion of the author those persons who hear conversation better than the watch, who hear better in a quiet room than where there is noise, and who hear the tuning fork better through the air than through the bone, suffer from an affection of the labyrinth or nerve and not from disease of the tympanum, although the latter may be engrafted upon the previous affection The general adoption of this view would save a good deal of local treatment of the naso pharynx and tympanum and greatly simplify and improve our therapeutics As far as the aural condition is concerned, I regard these cases as incurable I think that we can assure these patients that if the general health be looked after carefully that they will never hear so badly but that they can hear in a quiet place This has a good moral effect It makes the patient happier and enables us to dispense with much useless treatment

Dr Roosa also made some

REMARKS UPON A CASE OF CEREBRAL ABSCESS

The patient, a boy of eleven years of age, came under observation May 4th 1887, with a painful swelling over the right ear It was said that the boy had had some trouble with the ear two years before but that there had been no discharge For three months he had tinnitus aurium and vertigo One week before he was seen he had pain in the ear, then this swelling appeared Bone conduction with the tuning fork was better than aerial conduction The hearing power of the left ear was normal Immediately above and in front of the auricle there was a swelling about the size of the walnut This presented fluctuation There was a history that previous to admission to the hospital the treatment had consisted in the use of injections and the insufflation of powders The auditory canal was filled with a white substance which was supposed to be the powder that had been employed The day after admission the patient was etherised and the abscess opened with the removal of half an ounce of laudable pus No fistula was discovered The patient did well for nine days Nausea and vomiting then set in and the temperature went up to 104° The patient sank into a condition of coma and died on the tenth day after admission At the autopsy there was found a cerebral abscess one and one half inches in diameter situated in the tempero sphnoidal loba one half inch from the surface of the brain This was lined with thick membrane The membrana tympani was perforated and the upper wall of the canal was necrotic At the junction of the mastoid and squamous bones there was a spot of necrosis one half inch in diameter The canal and mastoid cells were filled with caseous material

Dr Roosa also reported the history of a case of

SUPPURATION OF THE TYMPANUM OCCURRING IN A PATIENT WITH BRIGHT'S DISEASE

The patient, a woman aged 42 years, was seen April 11, 1887 There was intense pain referred to the left ear which had existed since the day before The hearing was much impaired as a result of a chronic non suppurative inflammation of the middle ear The bone conduction was better than the aerial There was a watery discharge from the left auditory canal Examination of the urine revealed the presence of Bright's disease and the patient died some days later from œdema of the lungs The point which the author made was that although this patient complained a good deal of the mastoid process it was determined there was no lesion requiring operation because of the absence of the characteristic symptom of tenderness at the apex The case was regarded as one of tympanic trouble The post-mortem proved that there was no trouble with the mastoid but acute suppuration of the tympanum occurring in a patient with chronic non suppurative inflammation The patient died from the Bright's disease

Dr Emil Gruening, of New York I have this winter seen a number of cases of abscess In two months I saw seven cases In children I open the abscess and invariably open the mastoid cells I do this especially where the abscess has been preceded by otitis media purulenta In four of the seven cases the mastoid cells were filled with pus In this way through drainage was established and all the patients recovered I saw three cases of otitis media purulenta treated by insufflation of powder, leading to

retention of secretions and death All died of meningitis

DR LUCIEN HOWE, of Buffalo This case calls to mind one which I had in a child where there was a history of recurring attacks of ear trouble with discharge It was stated that good results had been obtained by the use of alum and boric acid This was continued and the patient began to develop the typical signs of mastoid trouble I etherized the child and removed the accumulation in the outer ear, all the symptoms then subsided

DR W H CARMALT, of New Haven The fact that the cerebral abscess was surrounded by a thick membrane does not prove that it was of long duration In a recent case of cerebral abscess resulting from an injury over the parietal bone, I attempted to reach the abscess by trephining, and passed my knife 2½ inches in the direction where I supposed the abscess to be, but got no pus The man died and I found an abscess in about the position I had passed the knife, but the wall was so thick that the pressure of the knife had squeezed the pus into the lateral ventricles and death had been the result In this case the operation was performed within two months of the original injury

(To be concluded)

AMERICAN OPHTHALMOLOGICAL SOCIETY

Twenty third Annual Meeting, held in New London, Conn, Wednesday and Thursday, July 20 and 21, 1887

WEDNESDAY, JULY 20—FIRST DAY

The meeting was called to order by the PRESIDENT, WILLIAM F NORRIS, of Philadelphia

The following were elected to membership Drs J B Emerson, New York, H F Hansell, Philadelphia, J O Tansley, New York, M Haywood Post, St Louis, and Edmund C Rivers, Denver, Col

A Memoir of Dr Ezra Dyer, of Newport, R I, one of the founders of the Society, was read by Dr Hasket Derby, of Boston

The death of Dr William S Little, of Philadelphia, was also reported

DR C S BULL, of New York, read a

REPORT OF THIRTY SIX CASES OF SIMPLE EXTRACTION OF CATARACT WITHOUT IRIDECTOMY

Of these 36 cases 20 were males and 16 females In 24, the cataract was hard and senile, in 11 it was traumatic and soft or semi soft, and in 1 case it was of secondary origin There were corneal mamlæ in 3 cases, tremulous iris in 7, old choroiditis in 5, and irido choroiditis in 1 Careful antiseptic precautions were adopted in all the operations The operation was done with the patient lying in the bed he was to occupy after operation The speculum was employed in every case The knife was long and narrow, narrower than that of von Graefe It was quickly passed across the anterior chamber, the flap measuring about two fifths of the corneal circumference Prolapse of the iris did not usually occur, but if it did, it was allowed to remain until the extrusion of the lens The capsule was then opened by a quadrilateral incision, and by pressure the lens was caused to pass out of the corneal wound If reduction of the iris did not occur spontaneously, it was reduced with a spatula All soft lens matter was washed out with the antiseptic solution (saturated solution of boracic acid), and 1 drop of a solution of eserine (gr j–℥j) instilled The lids are then closed and an antiseptic dressing applied If the eye did well the bandage was not removed for two days, but the eserine solution was instilled twice daily under the bandage At the end of two days the bandage was removed and the eye washed The lids were not opened for four days unless there was some indication for it If, at the end of this time, the appearance was favorable, eserine was reinstilled, and the bandage applied for another day, when it was removed altogether The healing process was usually favorable, there was no suppuration in any case There were 6 cases of plastic iritis of a mild type, and 2 cases of irido cyclitis In the first 30 cases there was no incarceration of the iris In the last 6 cases, in the treatment of which the same care was manifested, incarceration occurred in every one The average duration of the treatment was a little more than twenty days A secondary operation, usually a needling or a laceration of the posterior capsule, was required in 12 cases Prolapse of the vitreous occurred in 4 cases, and dislocation of the lens downward in 2 cases Eserine was not used after the healing of the cornea The degree of acuteness of vision obtained was as follows $\frac{20}{30}$ in 2 cases, $\frac{20}{40}$ in 8 cases, $\frac{20}{50}$ in 2 cases, $\frac{20}{70}$ in 10 cases, $\frac{20}{100}$ in 5 cases, and $\frac{20}{200}$ in 2 cases In one case the eye was blind before operation as the result of irido cyclitis The technique of the operation is more difficult than where iridectomy is performed The knife must be passed rapidly in order to prevent injury to the iris The extraction of the lens is more difficult, and the danger of prolapse of the vitreous is more imminent

DR H KNAPP, of New York During the past year I have performed Panas' operation 68 times Following the operation there was mild iritis in 3 cases, severe iritis with closure of the pupil in 1 case, protrusion of the iris in 3 cases, incarceration of the iris without protrusion in 2 cases, capsulo iritis in 1 case, and suppuration in 1 case This was secondary to an old disease of the eye In 27 cases a secondary operation was performed In 1 case I performed the operation in a man much addicted to drink The operation was successful, but there was slight wrinkling of the capsule In the fourth week I made a simple division of the capsule For twenty-four hours there was not a trace of reaction The following night he had an attack of acute iritis with dysentery, and the urine was loaded with albumen The next day there was circum corneal injection and the ball was very hard Eserine reduced the tension, but did not contract the pupils On the third day the ball was as hard as it is in any case of acute glaucoma I then made an iridectomy and the patient recovered

Dr H Knapp, of New York, then read a

REPORT ON A SERIES OF 1,000 SUCCESSIVE CASES OF EXTRACTION OF CATARACT WITH IRIDECTOMY

These cases were operated on during the years from 1866 to 1886 A tabular statement was given showing the results obtained in each series V = $\frac{20}{200}$ to $\frac{20}{60}$ was considered a good result, V = $\frac{20}{200}$ to $\frac{1}{200}$ was considered a moderate result, and where V = less than $\frac{1}{200}$ the case was regarded as a failure In the first series of cases, the method of extraction was by a very peripheric section, more curved than linear, with the following results good, 70 per cent , moderate, 22 per cent , failures, 8 per cent Of the failures 3 per cent were from suppuration In the second series a peripheric linear section was employed Results good, 86 per cent , moderate, 12 per cent , failures, 2 per cent , all from suppuration In the third series linear section was employed Results, good, 86 per cent , moderate, 9 per cent , and failures, 5 per cent , 3 per cent of which were due to suppuration The fourth and fifth series were performed by peripheric linear section with removal of the anterior capsule Results good, 82 per cent , moderate, 7 5 per cent , and failures, 11 5 per cent , of which 8 5 per cent were due to suppuration In the sixth series, in which peripheric linear incision with peripheric capsulotomy was performed, the results were good, 89 per cent , moderate, 1 per cent , and failures, 10 per cent , of which 8 per cent were due to suppuration The seventh series was operated on by the same method, only the section was less peripheral Results good, 88 per cent , moderate, 7 per cent , and failures, 5 per cent , of which 2 per cent were due to suppuration The eighth series was operated on by circular marginal section with peripheric capsulotomy and with antiseptic precautions Results good, 60 per cent , moderate, 8 per cent , and failures, 2 per cent , of which 1 per cent was due to suppuration The ninth and tenth series of cases were operated on in the same way with the following results good, 90 5 per cent , moderate, 5 5 per cent , failures, 4 per cent , of which 3 per cent were due to suppuration The results obtained, taking the 1,000 cases as a whole, were good, 85 2 per cent , moderate, 9 per cent , failures, 5 93 per cent , of which 3 8 per cent were due to suppuration

Dr J A Spalding, of Portland, Me , read a paper entitled

DOES SUNSTROKE AFFECT THE SIGHT PERMANENTLY?

The author introduced the question of the permanent effects of insolation (or sunstroke) upon vision So many pension claimants are now coming forward, asserting that they suffered from sunstroke and permanent loss of sight in the army, and finally became more or less blind, that it is quite desirable for the expert in examining such cases to be supported by greater authority than he is likely to discover in any text books or accessible literature In point of fact there has never been reported, in the vast extent of ophthalmic literature, but a single undeniable case in which sunstroke has been followed by permanent blindness, and only six others in which the eyes were ophthalmologically examined soon after the attack In all of these optic neuritis was distinctly marked, and in several vision was reduced to a low degree, yet ultimately all six recovered perfect vision without much, if any, treatment Two or three cases illustrative of the assertions of pension claimants were presented in the paper, and the precise reasons for granting or not granting a pension were reported in full Judging from the history of these cases, insolation had nothing whatever to do with the loss of sight, whilst from historical and scientific records it appears extremely doubtful whether the disease ever has any permanent effects on the sight The frequent allegations of patients losing their sight during a sunstroke, or of a dimness coming over their eyes, are simply descriptive of the incipient stages of unconsciousness and are untruthful in a scientific point of view These recollections become, in later years, the basis of pension claimants' assertions that their vision was seriously affected by sunstroke

Dr D B St John Roosa, of New York, reported

A CASE OF PROBABLE QUININE AMAUROSIS

The patient was a young lady who had been living in a malarious district While in Washington she had an attack of intermittent fever Some time after this she was seized with convulsions and unconsciousness It was believed to be a case of malarial coma, and 30 grains of sulphate of quinine were administered by the rectum on four occasions On the third day consciousness was restored, but she was then unable to distinguish light from darkness The pupils were dilated She has been taking quinine and iodide of potassium before I saw her, which was October 18, 1886 Vision was slightly recovered and she could count fingers at four feet On ophthalmoscopic examination the optic papillæ were found small, the vessels very small, but no exudation was seen Quinine three times a day with a hypodermic injection of strychnia was given The dose of strychnia was gradually increased to $\frac{1}{24}$ of a grain and kept at that for some time Vision gradually improved It was at first excentric, but by December 10 she had centric vision of $\frac{20}{70}$ The papillæ were still white and the vessels small The treatment was continued She returned to her home and now states that she can see almost as well as she ever could The urine was tested in this case several times, with negative results

Dr Emil Gruening, of New York In the latter part of June I saw a lady 50 years of age who had been given thirty grains of quinine in one dose When she awoke in the morning she was blind and deaf She was deaf for about twelve hours and absolutely blind for twenty four hours I saw her about five days after the attack The fundus was apparently perfectly normal in both eyes Central vision was normal but the field was much contracted in all directions It does not seem to me that the ischæmia which has been described in the more severe cases, should necessarily be present in the lighter cases of quinine amaurosis

Dr Swan M Burnett, of Washington, read,

CLINICAL CONTRIBUTIONS TO THE STUDY OF RING SCOTOMA

He gave the history in full of two cases of ring

scotoma which he had followed for the space of two years In one case there was a history of syphilis and in the other not, in both there was choroiditis with vitreous opacities In one case there were no gross changes in the choroid, in the other the changes did not correspond with the defect in the visual field In one case only one eye was affected, in the other the affection was binocular In one case the trouble began as a typical right hemianopsia with left semi annular scotoma The central clear spot more or less oval in form, 10°—20°, was never through all the changes diminished in size All who have written on the subject have placed the pathological process inside of the eye, though in none have the changes in the choroid manifest under the microscope been sufficient to warrant such a conclusion and in none have the changes in the form of the visual field been followed so closely or so long as in these cases The course of the nerve fibres in the tract chiasma and nerve as demonstrated by Bunge, Lamelsoker, Leber, Vassius and others, particularly in the somewhat analogous condition of central scotoma which in nearly every instance coincided in form and size with the central clear space in these cases, seems to justify the assumption that the fibres supplying the intermediate parts of the retina were hindered in their function either from a localized neuritis or by pressure of the adjoining parts

DR HENRY D NOYES, of New York A young lady, aged 17, came to me complaining of pain and dimness of sight in one eye The opthalmoscope showed no material lesion, but with the perimeter I discovered a ring scotoma There were no local lesions, no symptoms of brain trouble, and no evidence of hysteria Further examination showed signs of orbital neuritis I based this view chiefly on the fact that pressure of the globe backward elicited unquestionable pain This continued for at least two weeks The ring scotoma subsequently entirely disappeared and vision was restored to the normal I am satisfied that ring scotoma may have an extra ocular origin When we search for these cases more carefully I think that they are not so extremely rare as has been supposed

DR C S BULL, of New York, read a paper on

THE SO CALLED ORTHOPEDIC TREATMENT OF PARALYSIS OF THE OCULAR MUSCLES

The method of Professor Michel was described In this plan the muscle is seized with fixation forceps and the eye ball moved backwards and forwards in the direction of the ordinary action of the affected muscle This procedure produces some pain and slight irritation The pain is largely relieved by the use of cocaine The reader had employed this method in 21 cases of ocular paralysis due to various causes The paralysis was entirely cured in 8 cases, partially relieved in 7 cases and in 6 cases the treatment was entirely valueless

DR O F WADSWORTH, of Boston, read a paper on

RECURRENT PARALYSIS OF THE MOTOR OCULI

Pauline and Francis were twins born of healthy parents In June, 1874, when the twins were three years of age, they had scarlet fever and this was followed by a discharge from the ear In each case a slight discharge from one ear continued In 1877 Frances began to complain of headache which recurred frequently until three months later, when she had convulsions The convulsions were repeated Six months after the first convulsion she complained that she could not see Examination showed well marked optic neuritis The headache and convulsions gradually ceased but she remained blind She was again seen in 1879, and found to be in good health, with the exception of blindness Pauline, after the attacks of scarlet fever in 1874, had headache recurring every month or so On February 24, 1879, she was brought to the hospital with the history that she had suffered with daily pain in the head for two weeks, this was referred to the supra orbital region It would commence about noon, then intermit, recur again about 5 o'clock, and continue for several hours There was vomiting on the first two days of the attack and there was a slight discharge from the right ear She was seen one month later The headaches had recurred every two or three days There was then paralysis of all the branches of the right motor oculi nerve, with ptosis and divergence of the right eye By February, 1887, the headache had diminished in frequency, and for the last few years she has had three or four attacks a year, the more severe being accompanied by ptosis and dilatation of the pupil It was subsequently learned that with each severe attack there was a free discharge of ill smelling fluid from the right ear On May 1st, the right ear was examined and a polypus filling the meatus was found and removed The writer had been able to find only 15 cases of this affection on record Of this number 4 were males and 11 females The period between the attacks was variable and irregular In several cases there was evidently a persistence of a certain amount of paralysis between the attacks This was noted in the case just described There has been no case of permanent relief, and 3 of the cases have terminated fatally

As to the cause of the affection, the results of the autopsies point to a basal origin In one case plastic exudation surrounded the right motor oculi nerve, in another case the right oculo motor nerve was pressed upon at its point of emergence from the crus cerebri, and in the third case there was a fibro chondroma which had developed in such a way as to separate the fibres of the right oculo motor nerve without destroying them In the case reported, the speaker thought that there was an evident association of the paralysis with the chronic aural trouble

DR J A LIPPINCOTT, of Pittsburg, read a paper on

HYPERÆMIA IN MUSCULAR INSUFFICIENCY

The speaker reported several cases of localized hyperæmia of the eye which he thought were due to weakness of the muscles The grounds on which he based this view were the form and location of the spot of hyperæmia and its disappearance, along with other evidence of the muscular insufficiency *(To be concluded)*

FOREIGN CORRESPONDENCE

BERLIN AND HALLE [1]

German Congress of Surgeons—Volkmann's Clinic—Antiseptics in Compound Fracture, Dry Dressings—Candidates in Full Dress—Reform in Study and Teaching—Tuberculosis of Bones and Joints—Subcutaneous Osteotomy—Volkmann—Ohlshausen—Vesico-Vaginal Fistula—Gengmer

My Dear Doctor Fenger—I visited Berlin for the special purpose of attending the meeting of the German Congress of Surgeons, which convened in that city April 13, and lasted for four days You have undoubtedly read abstracts of the transactions in the medical journals, and I will make no attempt to give an account of the proceedings, but will limit myself to a few critical remarks I have been a member of the Congress for a number of years and always waited anxiously for the annual volume of Transactions, but this was the first time I had had an opportunity of meeting its members face to face A personal acquaintance always adds more interest to the literary productions of a writer or author, and it afforded me a great deal of pleasure to form personal acquaintances with men whose names had become familiar to me in German literature From the votes taken for the election of officers I think about 150 members were in attendance, and among them many whose names have long ago found a permanent place in surgical literature Among the most distinguished members present I will only mention Volkmann, Esmarch, Bergmann, Bardeleben, Rosenbach, Schœnborn, Wolfler, Gurlt, Kocher, Socin, Bruns, Hahn, Kummel, Mikulicz, Madelung, Trendelenburg, Kuester, Kovács, Israel and Julius Wolff The first evening was devoted to an informal reception at the Hotel du Nord, where old acquaintances were renewed and new members introduced, after which many met again in a favorite beer saloon where a superior quality of an infusion of hops imported from Munich, was freely patronized I understand that these informal gatherings are usually prolonged until 1 or 2 o'clock in the morning, and yet I always found the members ready for work early the next morning The permanent president, the founder and idol of the Society, B von Langenbeck, was unable to attend on account of ill health, which made the first vice-president, von Volkmann, the presiding officer You will be sorry to learn that Volkmann's health has been seriously impaired, as I believe, mostly from overwork He had just returned from Italy where he had been for three months for the purpose of regaining his former activity of body and mind, but his whole appearance indicates that the object of his visit was not realized, as he looked haggard and careworn It is indeed sad to see such a bodily and mental giant in such a pitiable condition, and all for the sake of science and for the benefit of his fellow men The Congress was formally opened in the Aula of the University by the President, with an eloquent address, in which he alluded feelingly and in beautiful language to Carl Schrœder and other members who died during the last year Professor Billroth and Sir Spencer Wells were elected as honorary members, a just recognition of valuable services rendered science by both of these distinguished surgeons

The programme for this year was a very prolific one as the list of subjects announced contained the titles of at least 20 papers The large number of papers made it necessary to limit the time, and for the last 6 papers only five minutes were allowed for the reading of each That for want of time the discussions were often cut off short can be readily imagined I think it would be profitable for the German Congress of Surgeons to imitate the example of their American brethren, and limit the number of papers sufficiently so that each author has ample time to fully present his subject, to be followed by a free and full discussion by the members Another great fault that prevails here is, that the subjects are not announced always before the time of meeting, so that the members are unable to tell beforehand what topics will be presented and discussed The American Surgical Association requires that each member who is elected to read a paper must not only announce his subject several weeks in advance of the meeting, but he is also expected to furnish the Secretary with a synopsis of his paper, so that when the members receive the programmes from the Secretary they can prepare themselves for the discussions, an example which the German Congress should adopt at once, as by doing so certain important surgical topics annually presented will be fully and systematically treated and will represent not only the views of the writers of the papers, but of all those who participate in the discussions One important feature of all meetings of the German Congress consists in clinical demonstrations of important cases, and in this respect we should learn from the Germans and make our meetings more interesting and profitable by presenting more cases and pathological specimens to illustrate our work At this meeting Sonnenberg showed at least 5 cases of Charcot's disease of the articular extremities of the long bones, Helferich a case of myositis ossificans, Israel a case of cheiloplastic, also a case of rhinoplastic and necessary pathological specimens were exhibited Madelung was the only one who read his paper in full, all the other speakers did not use their manuscript One morning I accompanied a number of the members to the Fridrichshain Hospital where Dr E Hahn, surgeon in charge of that institution, showed us on the cadaver how to perform gastro enterostomy On this occasion I was requested to illustrate my method of performing circular resection of the intestine and of establishing intestinal anastomosis, to which of course I readily consented All present manifested a good deal of interest in the new procedures The day previous to the final adjournment Professor Bergmann was elected by a large majority as President for the ensuing year Although the meeting was protracted for four days I observed, contrary to what we find in America, that nearly all the members remained to the last The German when he undertakes a thing always does it well and comes to stay to the last He considers these meetings as important events

[1] By permission of Drs Fenger and Senn

and will not leave for trivial causes or no causes at all The last day of meeting of all American societies is always slimly attended and at the final adjournment often hardly a quorum is present, an evil which certainly should be corrected

From Berlin I went to Halle, where I arrived April 18 Volkmann's Surgical Klinik is one of the best in the world It is built on the pavilion plan, composed of four sections, each section furnishing accommodations for thirty patients The operating amphitheatre is a model of its kind, and in its construction every care has been taken to make it perfect in its adaptation to antiseptic surgery The crucial test for the value of antiseptic surgery in preventing usual infection has been furnished here if anywhere Volkmann has now treated 300 consecutive cases of compound fractures without losing a single case from septic infection This unparalleled success can only be attributed to antiseptic precautions in the hands of a master Corrosive sublimate and iodoform are the favorite antiseptic agents at present and as a dressing for wounds a small compress of antiseptic gauze is used, over which a large cushion of moss is applied Volkmann places the greatest importance in the use of dry dressings and prefers moss to woodwool or any other substance I visited his clinic for two days and although no major operations were performed I learned many things which will be of great value to me

I found here a relic of the past age in the shape of four young gentlemen in full dress At first I thought they might be waiters in search of a place who had mistaken the beautiful hospital for a hotel or first class restaurant, but on looking at them a second time I detected the infallible sign across their cheeks and foreheads which showed that they were university men, and upon inquiry I was told that they were candidates for graduation It still remained a custom in that city that candidates for graduation during their last semester must appear in full dress These young men were at first objects of curiosity to me but soon became transformed into objects of sincere sympathy One by one they were called down into the forum, and confronted with a case through which they could not look as through transparent glass they became the target of a volley of quick, sharp questions which when not answered as promptly would meet with such encouraging remarks as "Aber, mein Herr, Sie haben mi diesen Morgen noch keine einzige rechtige Antwort gegeben" Do you suppose these young men under such circumstances felt proud of their distinctive dress? Not a bit of it I am sure that when pushed to the wall they would have been willing to amputate the tail end of their dress coats, and for the time being at least, do duty in positions suitable for coats which had undergone such a radical change

Prof Volkmann impressed me as a thorough but hard teacher Certainly, when a man with many scars comes up at the end of his last semester for graduation and cannot answer the simplest questions, there is some excuse for a teacher to become indignant But harsh words at this stage of proceedings will not alter the case If these young men had worked hard, and instead of duelling had spent their time in the dissecting room or the pathological laboratory, there would have been no occasion to wear a dress-coat, in disgrace The trouble with German teachers is that they do all the questioning at the end of the term, after the student has spent perhaps one, two, three or almost four years in idleness Let the professors do as we do in America, submit the students to daily or at least weekly examinations throughout their entire time of study, and the results will be vastly better It is impossible to make up in a few months what should have been done for years There is no question in my mind that the average American student learns more in one month than the average German student in three He learns more not because he has better teachers, or better facilities, but he makes better use of his time I am satisfied that in our last graduating class I had at least a dozen students who, after studying three years, would pass a brilliant examination in any English or German university They would have felt at home even in a dress coat in Volkmann's Klinik passing their final examinations

Volkmann is a firm advocate of early and thorough operations for tuberculosis of bones and joints, but thinks that the time has not arrived when we can render a decisive answer in regard to the prevention of general tuberculosis by the surgical removal of localized lesions He says that scientifically operations are strongly indicated, practically the surgical treatment is still on trial Although he has now performed more than 200 excisions of the knee joint for tuberculosis, he feels incompetent to render a final decision

Among the many interesting cases that I saw was a young man from Finland who came to Halle for the treatment of an anchylosed hip He had suffered from coxitis when 3 years of age, and when the disease finally became arrested it left the hip joint contracted When he came under Volkmann's care the foot on the affected side could not be brought within ten inches of the ground The limb was greatly atrophied and hip joint the seat of bony anchylosis Subtrochanteric osteotomy was performed and, as the thigh was also greatly adducted, the adductor muscles were divided at the same time For months no attempt at union was observed at the seat of osteotomy, and no improvement in this direction took place until H H Smith's splint was applied and the patient allowed to walk around Soon after this treatment was adopted callus formation commenced to take place, and now, more than a year after operation, an abundant callus marks the place where the bone was divided, and perfect bony union will be the result The limb is now only about three inches shorter than the opposite one, and with a high sole the patient will soon be able to walk without artificial support In dividing the adductors of the thigh, the sterno cleido mastoid, and some other deep-seated muscles, Volkmann prefers the open section to subcutaneous division, as the antiseptic treatment prevents complications, and through an open incision the opposing tissues can be more thoroughly and safely divided

Although Volkmann is only 57 years of age, I fear that his scientific career is near at an end on account of ill health His work has been well done He can afford to rest Let us hope that his health may improve so that he may enjoy the fruits of his labor He will continue to live and to work through his numerous pupils and a grateful profession

A visit to Professor Olshausen and his gynecological and obstetrical wards satisfied me that the principles of antiseptic surgery sown in such close proximity had taken deep roots and had thoroughly developed in a new sphere of usefulness Both the gynecological and lying in wards are perfect specimens of ordinary and surgical cleanliness, and consequently indigenous cases of puerperal sepsis are almost unheard of Professor Olshausen has been elected to the important and responsible chair in the Berlin University recently rendered vacant by the death of Professor Schroeder He showed me a number of cases of abdominal section which had been recently performed, and all the patients were doing well

I witnessed an operation for vesico vaginal fistula The opening, large enough to introduce the tip of the little finger, was located near the anterior lip of the cervix uteri The margins were vivified with the knife, and the edges carefully approximated and coaptated with four deep and four superficial silkworm gut sutures The impermeability of the wound was tested by injecting milk into the bladder Antiseptic drainage of the bladder through the urethra was established by inserting a short hard rubber tube to which was attached flexible rubber tubing, the distal end of which was kept in a dependent position and under a carbolized solution An iodoform tampon was placed in the vagina Professor Olshausen has not used silver wire for twenty years, and now uses in such operations exclusively silkworm gut sutures

When I visited Professor Geugmer at his house I found him celebrating his birthday in the company of a select number of friends, but he appropriated at least one hour of the festive day for my benefit, and we spent the precious time in a profitable and interesting way in the discussion of select surgical topics He has a large and remunerative private practice, and is one of the teachers of surgery in the University Professor Geugmer is well known as a teacher and writer, and at the last meeting of the German Congress he read a paper of great practical interest on a special form of hernia, which, after it has been printed, should be read by all surgeons who wish to keep themselves posted on this intricate subject

N SENN

LETTER FROM VIENNA

(FROM OUR OWN CORRESPONDENT)

Tuberculosis of the Conjunctiva—Surgery of the Biliary Ducts—Section of the Third Branch of the Fifth Nerve in a case of Neuralgia, with Recovery—Effect of Caffein, Theobromin and Xanthin on the Muscles—Professor Farkas

At a recent meeting of the Imperial Royal Society of Physicians of this city, Professor v Reuss showed an interesting and rare case of tuberculosis of the conjunctiva The patient, aged 66 years, suffered from a chronic tuberculosis of the apices of the lungs His father died of phthisis, and one of his brothers suffered from pulmonary tuberculosis The right eyelid of the patient was covered with flat and round granulations, and an ulceration 12 mm in diameter covered with granulations was also to be found on the edge of the eyelid In the part of the ulceration which had been removed for the microscopical examination, giant cells and a great number of tubercle bacilli were found Prof v Reuss stated that at first sight, without the microscopical examination of the ulcer, the affection might have been confounded with many others, as, trachoma, tuberculosis, epithelioma, lupus, and so on, but that all conditions except tuberculosis and lupus could be excluded

As to a lupous affection of the conjunctiva, it was a very rare disease, and moreover, if we had to deal in this case with such an affection, this ought to be present also on other parts of the organism Hence, taking into consideration the history of the case, the course of the disease, and the result of the microscopical examination, we must diagnose in the case under consideration a tubercular affection of the conjunctiva

At the same meeting, Professor Hofmokl showed two women on whom he had performed cholecystotomy with a very favorable result In the first case he performed cholecystotomy in February, 1885, and removed twenty biliary calculi from the opened gall bladder, there resulted a fistula which he afterwards closed No symptoms of cholelithiasis had been observed during the two years, and the patient was perfectly well In the second case, on which he had operated three weeks previously and had removed two biliary calculi of the size of a pigeon's egg, the patient was doing well Prof Hofmokl discussed the different conditions occurring in the biliary ducts which required operation, mentioned the difficulty of an exact diagnosis in some of these cases and the different methods which had been followed in the operations on the gall bladder In cases in which the diagnosis of the biliary affection was difficult, one had thought of performing the explorative-puncture of the gall bladder, or the explorative-incision According to the opinion of Prof Hofmokl, however, the puncture of the bladder had to be avoided as much as possible, as it might be very dangerous when there was empyema of the bladder, he preferred in such cases the explorative incision, as this caused no danger at all, when performed under strict antiseptic rules As to the method of operation, he preferred to first suture the bladder to the peritoneum and then open it, whereas Langenbuch gives preference to the extirpation of the bladder Langenbuch had, since 1882, performed this operation six times with five recoveries The unfavorable result in one was due to a calculus which had perforated the cystic duct, after this had been ligatured Prof Hofmokl remarked that it would be better to follow a third method, viz, to ligature the cystic duct, to open the gall bladder and suture it to the abdominal walls The opening of the

bladder by means of caustic paste was not to be recommended, except in cases in which there were adhesions or empyema Respecting the question as to whether cholecystotomy or cholecystectomy was to be preferred, he said that the method which must be followed depended on the respective case When the gall bladder was moveable, and the cystic and choledochus ducts were free, the extirpation of the bladder was indicated, but when there were stony adhesions, the resection should not be resorted to Forty five operations on the biliary ducts had been preformed hitherto, of these, 21 cases owing to empyema of the bladder, 15 recovered, 5 completely and 10 with fistulas Prof Hofmokl remarked at the end of his account that he brought forward his cases before the Society with the intention of inviting the other surgeons to communicate their experiences in this matter, so that reliable statistical data might be obtained as to the results of the operations on the gall bladder

Dr Salzer, assistant to Prof Billroth, showed a man who had been affected since 1883 with a severe neuralgia of the fifth, and in whom all medicinal treatment had no effect at all Galvanization as well as the repeated sections of the buccinator and the zygomatic nerves gave no relief The ligaturing of the left common carotid artery which had been performed by Prof Billroth himself had no effect whatever Dr Salzer, therefore, with the consent of Prof Billroth, tried to relieve the patient of his great pains by performing a resection of the whole third branch of the fifth, the inframaxillary nerve, close to the foramen ovale He, for this purpose, first made a curved incision in the skin over the zygoma, laid the temporal bone bare, and penetrated as far as the foramen ovale The hæmorrhage in this operation was insignificant, only a small muscular branch of the temporal artery had to be ligatured The nerve was then isolated from its surrounding parts and from the arteria meningea media and cut through with the tenotem from behind to forwards He then closed the wound except a small opening through which, in order to prevent adhesions, he introduced a piece of iodoform gauze as far as the foramen ovale, which was allowed to remain there 15 days The great pains soon disappeared, the injections of morphia could be left off, and no typical attack of "tic douloureux" had occurred since the operation As to the sensibility of the skin of the left side (corresponding to the side on which the operation had been performed), he found on examination that the sensitive paralysis corresponded almost to the extent of the territory which was supplied by the third branch of the fifth The highest degree of diminution of sensibility was to be found over the foramen ovale, in front of the ear, at the point where the auriculo temporal nerve made its exit from the skull The sensibility of the mucous membrane of the mouth, as well as that of the netherlip and that of the gums was impaired, this was also true of the left side of the tongue As to the sensibility of taste, no difference could be observed, which was an evidence that chorda tympani had not been injured Dr Salzer recommended this operation in desperate cases, although the permanent result was still questionable, as it involved no danger for the life of the patient

Docent Dr Paschkis and Dr T Pal, working in the laboratory of Prof Stricker, recently made an interesting communication as to the effect of caffein, theobromin and xanthin on the muscles They experimented on frogs in the following way One leg of the frog was ligatured close under the hip joint, and an aqueous solution of one of the drugs under consideration was subcutaneously injected into the back of the animal After a certain interval they quickly laid bare the gastrocnemius muscle as well that of the ligatured sound leg as that of the poisoned one, and fastened them to the kymographion The results which they obtained are The irritability of the muscle of the frog is first considerably augmented by small doses of caffein (Trimethyl xanthin), theobromin (Dimethylxanthin) and xanthin, and then disappears entirely (and after a certain interval of time disappears entirely) This interval is the shortest in caffein, and the longest in xanthin The course of the muscular contractions has in all three drugs one equal typical character, viz a rapid perpendicular elevation and a slow gradual decrease of the kymographic curve The condition of contraction of the muscle is the longest in caffein, the shortest in xanthin As the xanthin possesses the weakest effect, and the caffein the strongest, we might suggest that the effect in this group of drugs is gradually enhanced in proportion to the number of the methyl groups which enter into the primary chemical body

Prof Ladislaus Farkas, surgeon to the Elizabeth Hospital of Budapest, has recently signified his intention to attend the International Medical Congress in America He was a surgeon in the Servian war, and the instruments he has devised for war surgery have gained him great popularity in this country, besides he has a great reputation as a bold operator He expects to remain six weeks in America

DOMESTIC CORRESPONDENCE

MORPHIA AND ATROPIA IN HAY FEVER

Dear Sir —An article on "Hay Fever," in THE JOURNAL of July 23, is likely to convey the false hope that the remedy therein given will prove efficacious In the prize essay the author fails to mention that the ℞ morphine and atropia originated with Dr Morehead, of England, who published it in the *British Medical Journal*, and which went the round of American journals It is not my purpose to discuss the merits of the article, but as the title, "prize essay," may lead a number of your readers to try the remedy I, a sufferer from hay fever, have given it personally a most fair trial, and in my case, as well as those of several of my patients, it has proved the greatest disappointment SUBSCRIBER

New York, July 26, 1887

Dear Sir —The above letter, criticising my paper

on "Hay Fever," almost answers itself The complaint, that I did not give credit to the gentleman who first used morphia combined with atropia, is not pertinent, inasmuch as the purpose of the paper was not to give a history of the various drugs recommended, but to give the Hay Fever Association the results of my study of the disease "Subscriber" does not say that Dr Morehead, of England, preceded me in the use of morphia and atropia, combined, as I recommended, for hay fever I do not know that he did I believed that I was the first to discover the efficacy of this prescription in hay fever, although I did not so state in the paper I have used this prescription for several years successfully, not knowing that any one else had employed it except through my advice Evidently the new members of the United States Hay Fever Association had not heard of Dr Morehead's use of this prescription, for it is not mentioned in the Association's long list of remedies However, if the remedy is efficacious it matters little who first happened upon the discovery, but if it be worthless, as "Subscriber" avers, I cannot understand why he (or she) is so concerned to have due credit given to the discoverer

The fact that any given remedy may prove a failure in the hands of any one medical man, ought not to deter others from giving it a fair trial I am always thankful for honest criticism from competent critics Yours courteously,

SETH S BISHOP, M D

719 W Adams St , Chicago, August 3, 1887

CREMATION AND THE CATHOLIC CHURCH

Dear Sir —The statement in THE JOURNAL of Sept 18, 1886, relative to the position of the Catholic Church on the question of cremation having been discredited, I addressed a letter to Cardinal Gibbons on the subject A copy of his reply is enclosed for your information and that of your readers

Yours, Respectfully,

CHARLES A HARVEY

Washington City, June 29, 1887

C A HARVEY

Dear Sir —Cardinal Gibbons bids me acknowledge the receipt of your letter of the 23d He directs me to say that the Catholic Church discourages cremation as at variance with the practice of the people of God in the old dispensation and opposed to the cherished traditions of the Christian religion

Respectfully, Yours in Christ,

JOHN T WHELAN, *Secretary*

Cardinal's Residence, 408 North Charles Street, Baltimore, June 24, 1887

BOOK REVIEWS

GOUT and its Relation to Diseases of the Liver and Kidneys By ROBSON ROOSE, M D , F C S , etc Third Edition 8vo, pp xii—164 London H K Lewis, 1887

The seven chapters of this valuable little book are devoted to General Considerations with regard to Gout, Sources and Places of Origin of Uric Acid in the System, Theories as to the Nature of Gout, Causes of Gout, Irregular Manifestations of Gout—Visceral and Cutaneous Affections, Hepatic and Renal Disorders connected with Gout, and the Treatment of Gout and of various Disorders connected with it Of these chapters no one is more interesting or useful than that on the irregular manifestations of gout, to which too little study has been given If anything, it could be wished that this chapter was longer

This book is a comprehensive exposition of the subject, well written, and the reader is at all times convinced that it was written because the author had something to say The chapter on treatment is of great value, and he must be unusually well informed who can learn nothing from it

OUTLINES FOR THE MANAGEMENT OF DIET, or, The Regulation of Food to the Requirements of Health and the Treatment of Disease By EDWARD TUNIS BRUEN, Assistant Professor of Physical Diagnosis, University of Pennsylvania, one of the Physicians to the Philadelphia and University Hospitals, etc 8vo, pp 138 Philadelphia J B Lippincott Company, 1887 Chicago W T Keener

There are many books on diet for the sick in our literature, but very few which contain any good advice on "Regulation of Food to the Requirements of Health in Different Periods of Life," which is the subject of Dr Bruen's second chapter And there is one paragraph in this chapter which should be framed and posted conspicuously in every house in the land " No stimulating drinks of any kind should be used by the young or growing persons Milk or water or dilute cocoa should be the only beverages Coffee and tea may thus be reserved for later periods of life, when their stimulative properties may support the nervous system, whereas, if the patient has been overstimulated while formative forces are at work, it is often impossible to prevent the development of an irritated and unbalanced state of the nervous system, which many persons notice in young children, without understanding the cause or how easily the trouble might be obviated "

That portion of the third chapter, "Special Plans for Diet," which deals with infants' foods is replete with information and good suggestions, but some space should have been devoted to the necessity of giving water to infants, especially in hot weather Beef tea and broths are discussed, but we find no mention of meat extracts and but little of meat juice

As the title implies, we find in the book only outlines for the management of diet, and in so small a work one could not expect to find a complete treatise on diet and alimentary hygiene It is the third of a series of "Practical Lessons in Nursing" now being issued by the publishers The author has given us very satisfactory outlines for the management of diet, both in health and disease

INTERNATIONAL CONGRESS.

FUNDS FOR THE CONGRESS

To the Medical Profession

The local Committee of Arrangements have the pleasure to announce to their American brethren that the widespread desire to attend the Congress is such that the amount of money for the reception and entertainment heretofore deemed sufficient, will be entirely inadequate to provide for the large number that will be in attendance They are therefore constrained to appeal to their brethren throughout the country for additional subscriptions to the entertainment fund They feel that to their patriotic countrymen it is only necessary for the fact to be stated in order to secure the sending of such liberal contributions as will ensure the entire success of the social features of this great International gathering, on a scale commensurate with its dignity and importance Let all Americans come to the front and ensure to *all* the foreign members the full measure of the hospitality of free America Contributions should be immediately forwarded to Dr C W Franzoni, member of the Finance Committee for the District of Columbia

By order of the Local Committee of Arrangements

C H A KELLINSCHMIDT, *Secretary*

Washington, D C July 30, 1887

Medical editors, friendly to the good cause, will confer a favor by publishing this appeal [LD]

EXCURSION RATES TO CALIFORNIA

DR LISTON H MONTGOMERY

Dear Sir —I have been repeatedly asked by gentlemen of the medical profession, who will attend the International Congress at Washington, in September next, what would be the cost of a trip to California In reply I wish to say that an excursion to California will be had after the adjournment of the Congress Parties can take the route via New Orleans, returning via the Central Pacific Railroad, thus enabling the excursionists to see a large part of the country at a cost of a little less than the fare one way You may inform all who inquire that a low rate will be made This trip would be especially beneficial to the physicians from Europe, and also to those who have never visited California

Respectfully,

H M VAN ARMAN, T P A S P Co

Chicago, July 28, 1887

NOTE—Dr L H Montgomery assures us that at a later date than the above he was authorized by Mr Van Arman to state that the round trip either from Washington or Niagara to California and return, would be made at about $90, or less than the usual railroad fare one way, and that the Pullman sleeping cars for the trip would be $14 in addition These terms are offered alike to the foreign and American members of the Congress Tickets will be good for 60 or 90 days

EXHIBITS AT THE CONGRESS —All applications for space for Exhibits before the International Medical Congress should be addressed to Dr D C Patterson, Treasurer of the Committee of Arrangements and Chairman of Sub committee on Hall and place of meeting of Congress

MISCELLANEOUS

OLIVER WENDELL HOLMES HOSPITAL —This elegantly appointed hospital has been recently opened at Hudson, Wis The names of the physicians on the staff are an assurance that good work will be done Dr Irving D Wiltrout is the physician in charge, and Dr C C Dix resident The design of the hospital is to treat acute and chronic diseases, nervous diseases being a specialty

NEW YORK CITY BOARD OF HEALTH —Dr R S Tracy has been made Chief Inspector in the Sanitary Bureau, Dr Cyrus Edson Chief Inspector of Food, and Dr William Bullard Chief Inspector in charge of the work of the Sanitary Police

THE CONGRESS FUND —At its recent meeting at Crab Orchard Springs, Ky , the Mississippi Valley Medical Association contributed $250 towards defraying the expenses of the Ninth International Medical Congress

SANITARY CONGRESS IN SOUTH AMERICA —The Government of Peru has invited the republics of Central and South America to cooperate in a Sanitary Congress to be held in Lima on November 1

STATUE OF GUISLAN —A statue to M J Guislan, the eminent alienist has been recently unveiled at Ghent

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM JULY 23 1887, TO JULY 29 1887

Col D L Magruder, Surgeon, granted leave of absence for one month, to take effect on or about August 10, 1887 S O 170, A G O , July 25, 1887

Par 13, S O 167 A G O , assigns Lt -Col A Heger, Surgeon, to duty as member of Army Retiring Board convened at Governor's Island, New York Harbor, N Y , vice Col Chas Sutherland, Surgeon, hereby relieved

Major D G Caldwell, Surgeon, order relieving him from duty at Ft D A Russell, Wyo , and assigning him to duty at Ft Assiniboine, Mont , is revoked S O 168, A G O , July 22, 1887

Major P J A Cleary, Surgeon, ordered to Ft Assiniboine, Mont , instead of Ft D A Russell, Wyo S O 168, A G O , July 22, 1887

Capt S G Cowdry, Asst Surgeon, granted one month's leave, to take effect on or about July 24 S O 79, Dept Texas, July 13, 1887

Capt H G Burton, Asst Surgeon, sick leave of absence extended three months S O 171, A G O , July 26, 1887

Capt E T Gardner, Asst Surgeon, ordered for duty at Ft Reno, Ind Ter S O 170, A G O , July 25, 1887

First Lieut C S Black, Asst Surgeon, ordered for duty as Post Surgeon, Ft Bliss, Tex , during the absence, on leave, of Capt S G Cowdry, Asst Surgeon S O 79, Dept of Texas, July 13, 1887

First Lieut W D McCaw, Asst Surgeon, ordered for temporary duty at Ft Riley, Kans S O 78, Dept Mo , July 25, 1887

CORRIGENDA

In the article on Hay Fever, in THE JOURNAL of July 23 p 106, 2nd line from top of second column, read 'not only *not* benefit." Thirty-fifth line read *inferior* for interior Forty second line read *egetatiers* for vegetation

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N S DAVIS

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ORIGINAL ARTICLES

THE MANAGEMENT OF OCCIPITO-POSTERIOR POSITIONS

Read in the Section on Obstetrics and Diseases of Women, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY L. CH BOISLINIÈRE, M D , L L D ,

OF ST LOUIS MO

I shall premise my remarks by stating the well established obstetrical fact, that in 20 labors, the vertex presents 19 times The great Naegelé has demonstrated that in about one third of the cases of presentation of the vertex, the occiput was found in the posterior part of the pelvis, and in this position oftenest at the right posterior sacro iliac synchondrosis, occasionally it is found placed at the left sacro iliac joint, or in the hollow of the sacrum, and to sum up, the occiput is found seventy times at the left anteriorly, and twenty seven times at the right posteriorly, the other varieties of position being very rare This opinion has been adopted by most authorities in midwifery Seeing the frequency of this position, it is of the utmost importance to the accoucheur to study its mechanism and treatment

Causes —The chief condition of its production, as shown by Lusk in his admirable treatise, is a partial extension of the head, the forehead then turning anteriorly, in accordance with the law that "the most dependent portion of the presenting part is moved to the front "

Diagnosis Before Labor By Palpation —The vertex is easily recognized, but it is to the left, that the hand which depresses the abdominal parietes meets the greatest resistance, and penetrates less deeply, on account of the protrusion of the forehead on a level with the left ileo pectineal eminence Therefore, the back must be looked for to the right, and to recognize it distinctly, the patient should be placed on her left side, in order to be able to palpate the postero lateral region of the uterus (Pinard, Charpentier)

Diagnosis by Auscultation —According to Depaul, the maximum of the fœtal heart will be heard in the vicinity of the quadratus lumborum muscle, on a line from the right sacro iliac synchondrosis to the umbilicus

Diagnosis by the Touch —The head will be found in a state of semi extension, the posterior fontanelle is back, very high and difficult to reach The anterior fontanelle, in front and to the left, is easily reached Sometimes, the superciliary ridges and even the orbits can be felt, but they will reascend during a pain The nearer the centre of the excavation will the posterior fontanelle be felt, the more favorable will the prognosis be

After delivery, a marked prominence of the frontal bone, and a red mark there, will often be noticed This protrusion is produced by the more dependent position occupied by the forehead, the red spot by the prolonged pressure of this bone against the pubis These signs may serve to verify the diagnosis after the labor

A diagnostic symptom which I have often noticed in my practice is a premature discharge of the amniotic fluid before labor pains have begun

Prognosis —It is generally favorable, and in the majority of cases, the occiput comes spontaneously to the front But it must not be forgotten that this labor is much more painful to the mother and more dangerous to the child, on account of the great extent of the rotation necessary to bring the occiput to the pubic symphysis, and for this reason frequently requires assistance

In the minority of cases, where the rotation forward does not take place, and the occiput is born in an occipito sacral position, there is great danger of laceration of the perineum, or this may be centrally perforated, and the child born through the rent, as recorded by Velpeau, and as in a case I saw in consultation where, by a timely application of the forceps assisted by manual compression, the head was made to reenter the vagina and safely delivered The opening closed spontaneously

Mechanism of these Positions —In occipito posterior positions, how does the rotation of the occiput take place? It requires for its production sufficient uterine action, a resistant pelvic floor, a normally incurvated sacrum, and a normal condition of the ischiatic spines In fact, the rotation of the occiput forward is performed in accordance with the principle of the known geometrical theorem of the parallelogram of forces, through which, when two forces are acting on a moveable body in different directions, this body moves in the direction of the diagonal of those forces For instance, if a cherry stone be pressed between the thumb and index finger, it will fly off by a tangent which is the diagonal of the two opposite forces represented by the thumb and index finger

In this manner the occiput, acted upon by two opposite forces, viz the uterine contraction and the resistant pelvic floor, will be propelled forwards towards the anterior part of the pelvis

Why does not this anterior rotation always take place? It is because there is insufficient uterine action, a lax perineum or one lacerated in a previous labor, a flat sacrum, or abnormally projecting ischiatic spines If any of these conditions be present, there will be no anterior rotation of the occiput, and the labor may be indefinitely prolonged unless terminated by art

But, if all the factors favoring anterior rotation are present, viz uterine contraction, resistant pelvic floor, normal incurvature of the sacrum, and there be a marked projection of the spines of the ischium, or the child very large, then the rotation will take place backwards This abnormal projection of the ischiatic spines can be easily detected through the lateral vaginal walls at about two inches above the pelvic floor The detection of this projection will serve as a means of prognosis as to the course the occiput will take

When the rotation takes place posteriorly, the head descends in a state of forced flexion, the occiput against the sacrum, the forehead against the pubic symphysis, the occiput, following the postero lateral side of the pelvis, turns completely back, is delivered first, and the perineal comissure serving as a fulcrum to the neck, the head being completely extended, there appear successively under the pubic arch the bregma, the face and the chin

Conversion of an Occipito-Posterior Position into one of the Face —This may be spontaneous or produced with the forceps In this instance, the extension of the head becomes quite exaggerated, and the chin is first born under the pubic arch This conversion can take place only if the pelvis in a multipara be unusually roomy, the child small, the perineum lax or torn in a previous labor

Indications —When the labor is prolonged, painful, and there is no tendency to a spontaneous anterior rotation, other indications being present, such as exhaustion of the woman, eclampsia, hæmorrhage, weakness and irregularity of the fœtal heart, showing suffering and danger to the child we must then act promptly We should not expose the patient and child to the dangers of a forced rotation, but without hesitation rotate with the forceps the occiput back, and deliver it at the perineal comissure, with the precautions indicated below

Treatment —In the occipito posterior position, the labor may be terminated normally in two ways Either the occiput rotates spontaneously forward, and the case does not differ from one where the occiput at first corresponded to a cotyloid cavity, except in the duration and extent of the movement of rotation, or the occiput may rotate backwards towards the sacrum The obstetrician may imitate these two modes of delivery But, as the spontaneous termination of the labor in an occipito-posterior position is more favorable to the mother and child, it should be preferred Whenever the occiput shows a tendency to rotate forward, the obstetrician may select this mode of delivery with forceps whenever possible Other modes may be tried, such as rotating with two fingers, pressing back of the child's ear (Tarnier), or palpation These methods will usually fail Some high authorities teach that the occiput should always be delivered posteriorly Among these are Stoltz, Naegelé, Pajot and Cazeau Others teach that the occiput should always, when possible, be brought forward Such is the opinion of Smellie, Depaul, Charpentier, Blot, Tarnier and his pupils

The objections advanced against this method is the danger to the child on account of the great torsion of its neck, the anterior rotation requiring three-eighths of a circle to bring the occiput from the sacrum to the pubis Tarnier has instituted experiments to prove that this torsion does not take place in the neck, that it extends to all the cervical and some of the dorsal vertebræ Still, these authorities admit that there is torsion of the neck, but they claim that clinical facts prove the safety of the method

As for ourselves, we prefer the disengagement of the occiput posteriorly on account of the safety of the child, moreover, Lusk pertinently says that the attempt at performing an anterior rotation of the occiput usually fails Such has been the result of my experience, and I have adopted the practice of delivering the occiput posteriorly whenever the labor had been prolonged, is painful, and no tendency exists at anterior rotation Performed with great care this delivery is safe for the mother and child, in spite of the dread of a lacerated perineum This danger will be avoided by following in this delivery the following rules

The technique of forceps application in right occipito posterior position and in occipito sacral position In occipito sacral position the forceps, applied as in an anterior position of the occiput, the biparietal diameter is then parallel with the transverse diameter of the pelvis, and the occiput occupies the posterior part of the pelvis The left blade is applied to the left side of the pelvis, the right blade to the right side Here is an exception to the rule that the concavity of the instrument should always be applied to that part of the head which is to be directed towards the pubic symphysis, viz the occiput This is a direct and regular application

The forceps properly applied in the right occipito-iliac position, obliquely, must grasp the parietal bosses very firmly, else on the attempt at flexion the blades will surely slip forward towards the child's face, lose their hold and the needed flexion will be impossible, moreover, this slipping forward of the forceps may cause the blades to seriously cut the walls of the vagina Rotate the occiput in the hollow of the sacrum, before making tractions

The tractions are make backwards in order to bring the head to the pelvic floor When it has reached it, begin the movement of forced flexion, tractions quite upwards until the occipital protuberance clears the posterior commissure, then the forceps must be lowered towards the mother's anus and the child delivered by extension, the chin, face and bregma successively passing under the pubic arch

By this forced flexion, the vertex clears the posterior commissure by the sub occipito bregmatic diameter, which is three and three quarters inches, and by the final extension by its trichelo bregmatic diameter, also three and three quarters inches, both being safe diameters, and safe to the perineum

Thus will the perineum be moved If much distended, when a laceration appears imminent, episiotomy should be thoroughly performed To avoid laceration of the perineum, especially in a primipara, a small but most useful operation is episiotomy But the incision, in order to be of any assistance, should be made not *transversely but obliquely* on both sides of the vulva, thus cutting through the transversus perinei muscle The incision should be performed with scissors or blunt pointed bistoury and at least half an inch in extent A few hours after labor, these incissions will have contracted to the size of a short line, so that there can be no entrance of septic matter, through this channel Of course the perineum is supported with two fingers in the mother's anus to assist the flexion in the occipito sacral, and right or left occipito iliac positions The tractions to bring the head down to the pelvic floor are sometimes very difficult of execution and very fatiguing to the accoucheur Here Pajot's method should be resorted to, or Tarnier's forceps used until the pelvic floor is reached, then should be laid aside and replaced by any ordinary forceps, Elliott's Simpson's and Hodgs' especially, which are, on account of their small pelvic curve, safeguards to the perineum

By observing the above precautions, the perineum will entirely escape laceration, and a man may have a large experience in delivery in such cases, without having to stitch a single perineum

DISCUSSION

DR. E W SAWYER, Chicago The subject introduced by the classical and very interesting paper, just read, has a peculiar interest to me, as unfortunately I have been obliged to study it in its various details all the years of my practice, thirteen in number The time permitted me to discuss this paper is too short to admit criticism on some points which have been advanced I will briefly state what my experience has been in this direction as I think it is one of the most important complications that presents itself to the general practitioner, because it occurs with such frequency Many of the living writers and teachers state that the occiput presents in the right of the woman's pelvis once in a hundred times The statistics of Naegelé show that there is a vertex presentation once in five times My own experience confirms this observation with great exactitude In 103 cases of vertex presentation the occiput presented posteriorly in 38 This series I had the honor to classify and discuss before the American Gynecological Society in this city some three years ago Since that time 16 additional vertex presentations have occurred in my practice, making in all 54 cases in which the occiput was in the posterior part of the pelvis These cases have taught me some important lessons In the last series of 16 cases,, 7 were in the practice of other physicians in this city who will confirm what I will say I would like to ask Dr Boisliniere, when he states that the occiput usually turns forward by the effort of nature, how many times he has thus seen it rotate forward?

DR BOISLINIERE Perhaps in two thirds of the instances

DR SAWYER I will state to you in all sincerity that I am not a reckless meddler in obstetrics, but I have never seen the occiput turn forward in any of my cases I believe there is nothing in the pelvis to stimulate its turning forward A century and a half ago Smellie, than whom no more accurate observer has since appeared, said that the occiput was never known to turn forward When the forehead occupies the anterior half of the woman's pelvis it should always be turned, that is the secret of success, that is the secret of saving these children and preventing the extreme mutilation of the mother The ideas which I advanced in my paper before the learned Gynecological Society were criticised with some severity Prof Richardson, of Harvard, and Prof Reamy, of Cincinnati, expressing the belief that it was meddlesome to turn it forward, that the position occurred less frequently and that we could patiently wait until it did turn forward Being impressed with these criticisms I left that meeting determined that at the first occipito posterior position I had, I would wait In December following the reading of that paper a case presented itself to me in a healthy young English woman, a primapara, whose waters broke prematurely, as they are very likely to do I sat by that woman's side, the fetal pulsations assuring me of the integrity of the child, twenty four hours No evidence of an attempt on the part of nature to turn that occiput forward Still I determined to wait longer, and at the end of thirty hours the occiput popped out and mutilated the perineum to a shocking degree I may say in addition that the repair of this perineum was followed by a second pregnancy and I delivered the woman of a child without injury to the repair Following the maxim of Smellie, I believe there is but one way You may sit for hours waiting and nature will never rotate it The very obliquity of the planes the gentleman has described will prevent the occiput from turning forward I would like to speak of the causes of these presentations of the occiput, I think they are due less to extension of the head, as stated by Lusk One interesting fact in my own cases is that over two-thirds of the number were primaparæ, and the great frequency of this presentation in this class has led me to inquire into the difference between the multipara and the primapara and I think it is due entirely to the fact that the abdominal parietes are less elastic in the primapara, and in obedience to that law the dorsal surface of the fetus is placed into that hollow at the side of the woman's spine and is thus placed more obliquely I believe it is the inelasticity that turns the occiput backwards Smellie relates graphically and with great sorrow how he delivered a woman under these circumstances He waited until the woman was exhausted when he took a blunt hook and put it under the chin of the child He says, "I

took a hint from that case which I put into practice in my next," and he tells how he applied the forceps to the sides of the head and forced the head to rotate forward, and the result to the mother was very satisfactory In my own practice the same rotation is invariably carried out but not with the forceps It is not difficult, as has been intimated by the reader, to rotate the head forward, it is one of the easiest and most satisfactory things to do in obstetrics You have only to carry etherization to a satisfactory degree then introduce the entire hand and seize the sphere which presents in the palm of your hand, and nine times out of ten, even with fingers as short as mine, you can touch the forward shoulder and with the finger turn the body with the utmost facility Not once have I failed, and gentlemen here can attest to more than one case in which they have sat all night waiting for nature to turn the occiput, I have been called, the woman etherized and in fifteen minutes delivered of a living child Assistance can be rendered by the unoccupied hand by palpation over the woman's belly The satisfaction I have had in relieving gentlemen who have sat all night waiting for these cases has been greater than that I have experienced in any other department of practice

DR BOISLINIERE, St Louis, Mo The recognized position of the occiput is backward Naegele teaches that the frequency of the position of the occiput is first to the left anteriorly and last in frequency to the right posteriorly He says that out of 100 cases of vertex presentation, the occiput was 70 times to the left anteriorly and 27 times to the right posteriorly, and there is no better authority in obstetrics on this matter than Naegelé The fact of the occiput having been found often to the right posteriorly and having rotated to the right anteriorly, the Doctor denies the possibility of, because probably he has met with the difficulties I mentioned, in his cases Either the sacrum was very flat, the spine of the ischium projected so much into the cavity of the pelvis as to prevent the forward rotation The spines of the ischium have a great deal to with the rotation of the occiput forward I appreciate the Doctor's remarks very much, but in his cases I believe the spine of the ischium has prevented the anterior rotation of the occiput, or there has been a very flat sacrum, or a very large sacrum, else one of the factors have been wanting, there were not enough uterine contractions and probably the floor of the pelvis had been ruptured by previous labor or was very much relaxed I have attended between 8000 and 9000 cases of labor and have frequently seen the occiput face posteriorly to the right and rotate to the right anteriorly, but it requires a strong pelvic floor and no opposition from the spine of the ischium and labor favored greatly by the efforts of nature Of course the rotation is very painful In all my practice I have never ruptured a perineum I think the Doctor's method is allowable only in cases of multiparæ I do not think you can use the whole hand with a primapara, where the perineum and vagina are very small, unless you first perform episiotomy The Doctor's method is excellent when the woman has had children, the perineum is large and the child small

DELIRIUM GRAVE

Read in the Section on Practice of Medicine, Materia Medica and Therapeutics, at the Thirty Eighth Annual Meeting of the American Medical Association

BY E C SPITZKA, M D,
OF NEW YORK CITY

Synonyms —Delirium Acutum, Mania gravis, Typhomania, Bell's Disease, Délire aigu[1], Manie grave, Phrenitis

The disorder I am about to consider, owes its importance not so much to its frequency as to the fact that it furnishes opportunities for grave yet excusable errors in diagnosis It may fall to the lot of the general practitioner to see but a single case in a life time But that very single occasion will prove a memorable one On the one hand his diagnosis will oscillate between typhoid fever, meningitis, sun stroke and hydrophobia On the other he may be misled, through the occurrence of lucid intervals, to predict the recovery of a patient, who is in reality suffering from one of the most malignant and fatal affections of the nervous system to which mankind is liable

The nomenclature of acute fatal delirium reflects this great uncertainty The ancients spoke of it as *Phrenitis*, a curious term which still finds a place in certain vital statistics Abercrombie described an "inflammatory paralysis of the brain"—a term which is quite as good a one for a certain group of cases as any used According to Bell, alienists who occasionally saw cases of this disorder, classed it as a very acute and intense form of maniacal delirium Clouston, as recently as two years ago, illustrated this opinion of Bell by describing a typical case as one of acute mania in his "Lectures on Mental Diseases" The former an American writer, struck by the remarkable resemblance of the symptoms to those of adynamic typhoid delirium, devised the excellent name, *Typhomania* The French gave it the non committal designation, "acute delirium," which, owing to its ambiguity, I have proposed to change to "grave delirium"

The writers of the last decade assumed that grave delirium was a clinical entity Schule, Krafft Ebing and I have assigned it a special place in psychiatrical classification Serious objections exist to placing all cases manifesting such delirium in the same category Furstner, Mendel and others have shown that cases having the most different origin, may resemble each other in the final stage, and they demonstrate that Jehn and Schule were thus misled The experience of physicians limited to cases received in asylums does not cover all phases of the disorders in dispute Many are received in general hospitals in a moribund condition, or soon die there, others are treated at home, on the theory of isolation or essential fever Exceptional opportunities enjoyed by me during the past eleven years, and obtained in part through the courtesy of my lamented friends, T A McBride and Wm A Hardy, enabled me to review the subject in the light of altogether thirty one cases of real and spurious delirium of this order

[1] Brierre de Boismont, op cit

I shall first describe the typical form

The previous condition of most sufferers from grave delirium is usually poor General nutrition is impaired, and there is an obscure malaise, comprising ill defined nervous and slight gastric disturbances Sometimes the outbreak of the disease is preceded by from four to six weeks, by a matutinal headache This is described as a feeling of tension and often associated with vertigo The patient is irritable, light, sound and in some cases even odors annoy him Sleep is disturbed He finds it difficult to collect his thoughts, he feels conscious that he is morbidly emotional, but is unable to restrain this, and in a remarkably large proportion of cases there is a sense of some impending misfortune

The onset of the disorder may be so sudden and accompanied by so total a subversion of the mental and physical powers as to suggest the fulminating type of epidemic cerebro spinal meningitis, or the action of a violent nerve poison The patient while walking on the street, suddenly totters and if he do not fall stumbles about aimlessly like a drunken person At other times, while taking refuge from the impending misfortune dreaded by him, the sufferer breaks out in violent acts, which are, however, rather manifestations of anxiety than of aggressiveness He clutches at those about him, tearing their clothing or hair and then delirates about his enemies, refuses food because it contains poison, complains of crawling vermin has hallucinations of policemen, negroes, or of multitudinous images of a more frightful character, such as toads, snakes, bugs, goats and horses' heads, "with flaming eyes" Such visions cause him to pause in his delirious talk and to look in an alarmed or threatening manner at certain parts of the room In some cases the visions are of a pleasant nature, and the accompanying delirium may be of an ambitious, religious or erotic tinge Flaming spectra of angels, numerous husbands and countless lovers are seen, and in the midst of ecstatic contemplation, the patient starts, awakened by the voice of God or of a paramour, who delivers flattering missives in a voice of thunder or a glare of celestial light Sometimes the terrible and pleasant alternate in the history of the same case In that event corresponding changes in demeanor of a most dramatic character are noticed The attitude of a timid hunted victim gives way to theatrical gestures, and exclamations of terror to praying, singing and whistling In the erotic form, obscene gestures are indulged in, and the genitals are manipulated either automatically or with a definite purpose Rapid changes of this kind are particularly observed in females At one time such patients will dance and jump around laughing immoderately and vociferating, at another they will be found dissolved in tears, or try to escape from their imaginary foes with an air of intense anguish

A noteworthy feature is, that even with this violent onset, there are periods of relative lucidity and apparent health, in which the patient may recognize his delusions and hallucinations, perhaps try to explain them away, by admitting that he has been drinking too much, or may voluntarily consult a physician But in the latter event the uncontrollable nature of the disorder exhibited a sinister illustration in one of my cases The patient complained of something "funny" in his head, said that everything seemed confused and that there was a load on his chest But while dilating on the latter feature he suddenly exclaimed, "they want to burn me," "poison is in this atmosphere," "keep me in your office, doctor," "I am crazy, and they want to take me to an asylum" Then he passed into the wild delirium characteristic of the height of the disease

The development of the disorder takes place amidst increasing insomnia The flight of ideas becomes wilder, but more stupid True remissions no longer occur in the delirium, but there are spells of quietude due to exhaustion Indeed it is remarkable that with the unceasing raving and motor activity at this stage, fatal exhaustion does not close the history of the case thus early The patients roll around, kicking, grinding their heads against the wall, twirling rubbing or beating their hands so as to actually mangle them, and maintain the most singular and uncomfortable positions for hours and days Speech becomes more and more indistinct, and there is as kaleidoscopic confusion of syllables and words as of ideas

At the acme of the disease thus developed, everything about the patient indicates that he is suffering from something more than a mere mental disturbance Every symptom attests that he is the victim of a profound bodily disease The head is at first hot, the conjunctivæ injected, the expression is stupid and the face suffused and turgid Later on cyanosis often sets in The carotids may appear to throb violently, but in reality cardiac action is extremely feeble, the pulse being filiform, easily compressible and ranging from 110–160 It shows a striking parallelism with the temperature The latter is high, running from 101° to 104°, but in the stage of collapse, and those spurious remissions due to collapse, often becomes subnormal The pupils are in most cases dilated, myosis is occasionally observed, and while light reaction is commonly unimpaired, it is sluggish in a few cases The expression of the countenance is peculiar In some, particularly those who indulge in obstinate mutism the eyelids and lips are tightly closed, and every attempt to open them is firmly resisted Others keep their eyes fixed on a special point, such as the gas fixtures, making all the while a peculiar blowing motion with the mouth and cheeks, with more or less regularity and with no conscious purpose As dissolution advances, the features become drawn, giving an indescribably sad expression

The delirium which has given its name to the disease, is either wild or rambling It may continue in any of the channels indicated at the outset, being accordingly either aggressive, expansive or depressive As the disease progresses it becomes more and more monotonous and is often limited to one subject Soon this monotony extends to the mode and form of expression The faculty of expressing himself, even in broken sentences becomes lost, and the patient, after passing through a period of syllable

confusion, makes meaningless sounds which are endlessly repeated Still, even amidst this wreck of the mental mechanism, a predominant idea can be occasionally discovered In one of Brill's cases, the name of the girl's seducer, in another, one of my own, the occasion of a quarrel which had been the exciting cause of the disease, and in a third the name of the Deity, were repeated in an impressive manner until utterance failed Undoubtedly much of what is represented as insanity in romance, is based upon a picture of grave delirium, perverted by lay tradition

Indications of illusions and hallucinations are frequently observed One of my patients insisted on the removal of a pair of legs which he claimed were in his bed Another yelled that they were drowning him in something that smelled like benzine, a third picked off the "crabs" with which he imagined himself to be covered With this there is extreme motor agitation which ultimately becomes aggravated until a most unprecedented form of automatic violence is developed Cases are on record in which the patients literally converted themselves into one continuous bruise, others in which they picked, chafed or rubbed their matting and bedding into furze They may bore away at the sides of their room with their heads until the plaster is worn away, or break out in blind and purposeless motor delirium, kicking, striking and developing force that half a dozen skilled attendants may fail to restrain the sufferer Others will indulge in less aggressive acts These will stamp on the floor as if laying a Belgian pavement, continue making salaams for days, or rub a finger knuckle against their teeth until the bone is exposed, or the joint actually gnawed off In one case described by Sander the patient, a young girl, had torn her perineum and made great rents in her vulva These movements which occupy a position intermediate to the clonic spasm and automation, are variegated or interrupted by tonic spasms They result in strange bodily contortions, resembling, though not identical with, those found in tetanus The maintenance of such uncomfortable positions for days at a time indicates a profound degree of anæsthesia In some cases the hand is *main en griffe*, the nails being pressed so tightly into the palms as to cut the latter In a number of patients there is a tendency to bite, and this tendency is so strong that in default of foreign object one such patient bit off his tongue It is this class of patients who exhibit a terror of water, and undoubtedly many cases of so called dydrophobia were naught else than cases of grave delirium To the best of my knowledge it is the only genuine hydrophobia in human pathology In a few instances peculiar forms of disturbed sensation, in addition to the anæsthesia already referred to, are observed In the event of pruritus patients may scratch their entire bodily surface until it becomes eczematous In the majority there are suggillations due to surgical causes, and these, owing to the depressed vitality of the patients, look like the hypostatic marks of dead subjects To add to the corpse like appearance entailed by this terrible disease, the extremities become cyanotic and œdematous In addition, herpes, bullæ, pemphigus, pustules and phlegmonous inflammations have been noted

As regards the somatic functions, those of the stomach are most constantly disturbed There is always a pronounced oral *ptor* and frequently bilious vomiting The appetite is ordinarily impaired or entirely destroyed, and the patients will reject the food after it has been placed in their mouths and spit on that which is still in the dish Pulmonary œdema often occurs In no case that I have observed, nor in any one reported by others, were the catamenia suspended or even delayed In this respect there is a marked difference between grave delirium and the typical acute forms of insanity

Death usually takes place quite suddenly, sometimes while the patient is yelling, at other times in coma, and is then preceded by *subsultus tendinum* In those cases which were carefully observed in the moribund period the symptoms indicated exhaustion of the oblongata Intermission of the pulse, hiccough, dysarthria and difficult deglutition are then noted The hydrophobia previously present may give way to thirst, though the patient be unable to swallow

It is a surprising fact that in the midst of the very acme of a disease manifesting the severest lesions of consciousness, those para lucid intervals should seem, which I have already commented on, as inexplicable features of the initial phase Even here the wandering and delirious attention may be fixed, the patient brought to recognize that he is ill, deranged, in a hospital, and that his *interlocutor* is a physician Yet, cases are reported in which such an interval lasted four days and the temperature went down But the physician must not be misled into giving definite assurance of recovery In a few hours the scene changes, and the march to the fatal termination is resumed Death may even take place in the very midst of a lucid interval, and no more touching circumstance can be experienced in medicine than to witness the mother of a family, who has passed through the mental hurricane of acute delirium first reduced to a level lower than that of the brute, to return to nearly full consciousness a few hours before death, cry over the escapades, she infers rather than remembers, having been guilty of sending for her children to take leave of them, and apologizes for the trouble given the nurses, to whom she makes a few appropriate presents If any fact in the history of grave delirium convinces me that it is not a form of ordinary insanity, but rather a somatic condition of which the delirium is a symptom, it is this very one

The causes of grave delirium may be summed up as consisting in an inherited or acquired predisposition, to which some exciting cause, such as will deeply affect the emotional faculties, or otherwise vitiate the nutrition of the nerve elements and determine congestive hyperæmia, is superadded

I have tabulated 11 of my cases in which the history was nearly perfect, and 19 of which good histories here furnished by other writers, making 30 cases in all The following tables accordingly show the influences of predisposing and exciting causes

TABLE SHOWING FAMILY HISTORY.

	Males	Females	Total
Insanity in direct ancestry		4	4
Insanity in uncles aunts, sisters or brothers	2	10	12
Normal family history	2	6	8
Not stated	1	5	6
Total	5	25	30

Of 20 known 16 had heredity

TABLE SHOWING INDIVIDUAL HISTORY.

	Males	Females	Total
History of previous attack of insanity		7	7
History of feeb'emindedness	1	2	3
History of ugly excentric or excited temper	2	1	3
History of alcoholism	1	1	2
No abnormal features		5	5
Not stated	1	9	10
Total	5	25	30

Of 20 not known 17 had acquired disposition

TABLE SHOWING EXCITING CAUSE.

	Males	Females	Total
Angry excitement	1	5	6
Fright and angry excitement		1	1
Religious excitement		1	1
Seduction		2	2
Depressing emotions	1	2	2
Overstrain	1		1
Alcoholic excess		1	1
Insolation alone		2	2
Insolation and worry		1	1
Not stated	2	10	13
Total	5	25	30

Of 29 known 13 had emotional causes

Regarding the age of these patients, which is stated in the case of 27, I find the youngest, a female, to have been 18 at the time of her death (Fron muller), and the oldest 50 (Clouston) Four are 30, three 34 two each, 37, 28, 27 and 26 The largest number, eighteen out of twenty six, were be tween the 26th and 37th years inclusive The av erage age was $34\frac{5}{6}$ years

It is noteworthy that only one sixth of the cases were of males

As regards the duration, in twelve cases where it was accurately known, it was nearly fifteen days, dat ing from the outbreak, the longest being nineteen, and the shortest six days Schule speaks of cases lasting but a single day, but he confounds so many different conditions under the head of acute delirium that, in the absence of confirmatory experience, I do not feel inclined to attach much weight to this statement

As to the prognosis, it may be regarded as almost invariably unfavorable Very few indeed recover, and then they pass through an intermediate period, of which dementia, and what I term focal amnesia, are the characteristic features With one exception, the recoveries reported were of persons in whose his- tory alcoholism or hysteria were prominent factors That one exception occurred in this country and was reported by Dr Harriet Brooke assistant physician at the insane department of the Pennsylvania Hospi tal As it is the only case in which the symptoms were well marked, characteristic, and in which the mor bid condition reached a high degree, that recovered, I will make the only reference to therapeusis which this paper is to contain, in connection therewith Morphine, which is of excellent effect in analogous conditions, is so utterly without influence on acute delirium, that what would, under ordinary circum stances, be toxic doses, can be given without even affecting the diameter of the pupil The only pro cedures that have any useful influence are those em ployed to combat the threatening collapse Hypo- dermics of ether have been used by me with excellent effect, and, as in congestive paretic dementia, ergotin exerts a beneficial influence In Dr Brooke's case both were given, the latter in combination with dig italis, a dose of croton oil administered, a large mus- tard plaster applied over the pericardium, and as soon as the oil operated, reaction from what threatened to prove a fatal collapse was established Of course, a tonic and nutritious diet are necessary adjuvants to such a plan of treatment But it is usually rendered impossible by the patient's refusal to eat, and if he eat, by the low state of his digestive and assimilative functions

There is one condition which is most easily con- founded with grave delirium, and that is the so called nervous or ataxic form of typhus This disorder is characterized by delirium, somnolence, stupor, and muscular tremor of an excessive character The presence of petechiæ, albuminuria, and the great cardiac enfeeblement increase the resemblance If we bear in mind that this form of typhus is most apt to occur in those cases in which depressing causes have acted on the nervous system, we will under- stand how even the etiological history of the case may mislead the diagnostician A characteristic eruption may be absent, the temperature may fail to furnish us with a reliable guide In these events, the presence of an epidemic, the initial chill, great thirst and the predominating muttering character of the de- lirium, are our only means of establishing the exist- ence of essential fever

Analogous conditions are observed in typhoid fever Exceptionally cases occur in which there is an initial delirium of such character and severity that the sufferers are sent to the insane asylum under the mistaken view that they are suffering from a strictly mental disorder As in grave delirium, paroxysms of screaming and violence may occur There are also sudden changes, the patient who at one moment attempts to jump out of the window, the girl who calls for a baby, or begs to be taken home, may rapidly subside into muttering delirium, coma and death Lucid moments are equally noted The exact and collateral evidences of typhoid are, however, less variable than those of typhus, and a diagnosis by ex- clusion is less difficult

There is a disorder, extremely rare, it would seem, which is termed acute grave hysteria, and which I should be sorely puzzled to differentiate from grave delirium Such cases, carefully observed during life, and analyzed post-mortem, are reported by Meyer and Fronmuller I have myself seen two, in which the hysterical character was most marked, and the temperature rose nearly to 103° In one of these there was a fatal issue The girl, depressed by moral

influences, exhibited spasms of face and eyes, lay speechless, refused food at times, and thus continued for nearly two weeks Then she suddenly developed restlessness, threw herself around in a peculiar way so as to lie across the bed, had crying and laughing spells, tremors of the extremities, aphasia, mutism and total anæsthesia There was mydriasis Consciousness, which was impaired as a general thing, was fairly clear at intervals. In the fifth week of her illness, while in a crying and laughing spell, she suddenly expired Of course, the predominance of motor symptoms at the outset, and the crying and laughing spells, spoke in favor of a hysterical disorder Those who saw the case with me had already given a favorable prognosis I diagnosticated grave delirium and gave an unfavorable prognosis My chief ground was the high temperature But I have since learned that a temperature of 102 5° is occasionally reached in the severer form of seizures occurring in the course of benign hysteria

In a number of cases a series of symptoms, not unlike acute delirium, has been demonstrated to have resulted from multiple infection of the brain due to ulcerative endocarditis

A few cases have also been described in which the results of a blow on the head, in a chronic alcoholist, during the prevalence of an epidemic of typhoid fever, and an ordinary suppurative meningitis, breaking out from some cause not distinctly traced in a person who had received a blow a long time before, accurately imitated the course of acute grave delirium If all these considerations did not prove that this symptom group was merely the terminal phase of a number of affections having this much in common, that the brain is alike overwhelmed in all by some severe and multilocular morbific agent, the anatomical evidence would seem to establish this proposition beyond a peradventure Cysticerci, when scattered in large numbers through the brain, have produced motor and mental symptoms not unlike those related Extremely acute cases of paretic dementia, which is a multilocular schirro encephalitis with vaso motor episodes, resemble it so closely as to have been confounded with grave delirium by Jehn and Baillarger Finally, I have observed a case in which I was able to demonstrate—crudely, it is true, for the methods of that day were such—that a case of delirious mania with paralytic symptoms was due to the presence of miliary foci, containing a capillary as a centre, surrounded by disintegrated brain detritus, and this in turn by a zone of invasion of micrococci Furstner found that the blood of those who suffer from that form which leads patients to asylums presents a peculiar consistency When removed from the finger during life, it is found to be of a remarkably dark color On microscopic examination numerous bodies presenting the character of detritus are found Contrary to what is the rule with dark blood, its fibrin coagulates rapidly and *en masse* He also found a peculiar condition of the muscles, these are brownish and exhibit exquisite amyloid degeneration, a change which, as is well known, occurs also in typhus, variola, pneumonia, puerperal fever, epidemic meningitis, and traumatic or rheumatic muscle disease This author does not find noteworthy organic brain changes, but in just such cases as those described by him, but lasting a little longer, Clouston describes a deposit of new material all *through the gray matter* Futterer found fifteen grayish yellow foci, visible to the eye located at the junction of the gray and white matter In a beautiful case of this kind I found hyaline and fibrinous exudation throughout the same districts, ten years before Futterer's paper was published Like him, I had regarded them as the result of thrombic stasis I may add that attempts to cultivate the bacilli found in the blood in this disease, by Briand and Marcel, failed

On reviewing the entire evidence relative to grave delirium in the narrowest sense of the word, we find the following facts prominently established

1 It attacks persons whose hereditary tendency involves what may be biologically regarded as a chemical, that is a nutritive instability of the nerve elements

2 The exciting causes are either functional abuses or external influences of a kind which would aggravate such instability, and overburden the metabolic capacity of brain tissue

3 The blood and muscles exhibit pathological conditions closely resembling, in the latter case, those found in zymotic disease

4 All we have to assume is that, in consequence of the defective chemistry of an invalid brain, and its inability to meet the emergency of the exciting cause, some chemical body is formed which is at once toxic to the new elements, and changes the constitution of other important structures *In other* words, grave delirium is to be regarded as a self intoxication analogous to diabetic coma

Whether the toxic agent be a ptomaine, or something analogous to the chemical body which Meynert, in a beautiful theoretical exposition, suspected the existence of in epileptic coma, comparing it to the cyanides, I am unable to say The structural changes in the brain are altogether secondary, they may aptly be compared to those resulting from alcoholic excesses An alcoholic excess may prove fatal, but no structural changes result from a single such excess A series of excesses extending over a long period of time may, however, produce degenerative and vascular lesions Similarly, the intense poison of grave delirium may prove rapidly fatal, and no characteristic lesion changes be found after death, while in cases of longer duration, secondary results of hyperæmia and sequential stasis, modified by the peculiar state of the blood itself, are left to attest the malignant influence of the mysterious poison to which this terrible malady must be attributed

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[A full account of the morbid anatomy and pathological theory of this disease is given by the writer in the *Transactions of the American Neurological Association* for the current year]

REMOVAL OF NECROSED BONE BY IRRIGATIONS WITH WEAK HYDROCHLORIC ACID

Read in the Section on Surgery at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY EDMUND ANDREWS, M D , L L.D ,

PROFESSOR OF CLINICAL SURGERY IN CHICAGO MEDICAL COLLEGE SURGEON TO THE MERCY HOSPITAL ETC

In almost all cases of necrosis the dead bone can be removed without operation by the simple process of daily irrigation with diluted hydrochloric acid This is especially important in spinal necrosis and caries, but is also applicable to necrosis in other parts of the body

Nearly all our authors are silent on this subject, for though Dupuytren and other older surgeons have spoken of brushing the cavity with strong sulphuric acid, they contemplated merely a caustic action to change the condition of the diseased living parts, and not the dissolving out of the sequestrum Others however, have proposed the solvent plan, but without gaining a serious hearing in surgical literature Billroth, of Vienna, briefly alludes to the subject, but scouts the whole idea in the following strong, but ill considered language "Chemical solution of the sequestrum is not to be thought of If you were daily to pour muriatic acid into the fistulous opening, it would affect the newly formed osseous tissue as much or more than it would the sequestrum, which would be very unfortunate, as it must replace the latter Hence, the mechanical removal of the sequestrum is the only thing left "

In opposition to this high authority, I wish to state as the result of actual experiments that, by a little ingenuity in the management of the irrigation, most sequestra can be dissolved out, and if the solution be properly prepared it does not affect the living bone, nor act upon the soft parts, except as a good antiseptic, neither does it cause any pain In fact, by the addition of cocaine and morphine, it can be made anodyne

So far as my investigations have yet gone, I find no solvent equal to a weak solution of hydrochloric acid Sulphuric acid seems to limit its own action by precipitating the insoluble calcium sulphate in the Haversian canals, and blocking the further access of the acid Thin laminæ of bone will lie in a dilution of this acid for days with only a slight degree of decalcification Chromic acid is also inefficient, and stains the linen on which it happens to drip Nitric acid decalcifies the bone rapidly, but I have not yet finished the experiments for ascertaining its practical usefulness

The proper strength of the hydrochloric solution varies with the tolerance of the patient, the object being to keep it just below the painful point This will usually be found between one fourth and one-sixteenth of the strength of the officinal *acidum hydrochloricum dilutum*, although it can be employed somewhat stronger by the addition of cocaine and morphine The tolerance seems to be determined largely by the presence or absence of a good coat of granulations upon the living tissues Directly after an operation, the cut extremities of the nerves are painful on the application of any acid, however weak, but after a few days, when covered by granulations, they bear comparatively strong solutions without difficulty

The length of time required will vary with the strength of the solution, and the constancy of the irrigation The following experiments were made outside the body to get an idea of the rapidity of the action of the acid Fragments of actual sequestra which had been removed by operation were placed in bottles of acid of various strengths, and the time required for complete decalcification noted

TABLE SHOWING THE TIME REQUIRED FOR DECALCIFYING SEQUESTRA IN WEAK HYDROCHLORIC ACID SOLUTIONS OUTSIDE THE BODY

Experiment	Strength of Solution		Dimensions of Sequestra	Time required for Decalcification
1	1 16	the strength of officinal dilute hydrochl acid	4½ cm by 1 cm by 3 mm	142 hours
2	1 10	do do	3¼ cm by 14 mm by 4 mm very hard seq from tibia	120 "
3	1 10	do do	4¼ cm by 28 mm by 20 mm Very spongy tuberculous trochanter	24 '
4	1/8	do do	9 cm by 32 mm by 5 mm	117
5	1 12	do do	38 mm by 9 mm by 4 mm	120 '
6	1/8	do do	2¼ cm very hard sequestr	128 '
7	1/8	do do	5¼ cm by 13 mm by 1 cm	102
8	1/6	do do	8 cm long whole thickness of shaft of femur, diam 2 cm	96 '
9	1/4	do do	32 mm by 13 mm by 3 mm	102 '
10	1/4	do do	64 mm by 38 mm	54 "
11	1/4	do do	Block of cancellated bone 16 mm diameter	78
12	1/4	do do	Sundry small splinters	54 '

Average time of solution, about 95 hours

These experiments show that old sequestra, which have lain long in putrid suppurating cavities, are not deprived of their gelatiniferous animal basis In every instance the decalcified animal matter remained in full form, but, lying enclosed in granulations inside the body, it is rapidly absorbed, exactly like the decalcified bone drainage tubes when left in position

The method of effecting the irrigation is important If one simply pours a little acid into the fistula, as Billroth evidently understood the plan to be, he will accomplish nothing It is necessary to irrigate the whole sequestrum either frequently or continuously If possible, one should have two openings, so situated that the fluid may run into one, and thence along the whole length of the sequestrum and out at the other When necessary, new openings must be made in suitable positions, and left pervious by drainage tubes The next step is to fill a half gallon fountain syringe with the acid solution, and, hanging it by the bedside, to let it run very slowly through the diseased channel If a "through and through" irrigation is not possible, we can often obtain the same result by taking a small flexible catheter, especially of the kind having a curve near the tip, and called by the French *sonde coudee* By a little careful management this can often be carried to the farthest corner of the cavity, and by attaching it to the fountain syringe it will deliver the fluid beyond the sequestrum, and make it flow over it on its return outside the catheter Whenever the se

questrum can be thoroughly irrigated, its decalcification is a matter of absolute certainty within a moderate number of days The hydrochloric solution is a perfect antiseptic of itself, and during its use no other is required

After the solution is completed there remains the gelatiniferous animal matter of the bone, which is identical with the material of decalcified bone drainage-tubes, and like them is rapidly absorbed in antisepticized cavities I have commenced to investigate the possibility of dissolving it out at once with pepsin, but have not finished that part of the subject

Billroth raises the objection that the acid will dissolve the living bone as rapidly as the dead, or even more so So plain a point as this of course cannot fail to rise in everyone's mind, but I am sure that great man spoke from mere theory, and not from observation or experience Whatever one might fear in this respect, I find as a matter of experience that the weak solutions which I have used do not decalcify living bone Apparently the granulations covering the living osseous tissue protect it from contact with the acid, except in spots denuded by ulceration, and even there the circulation of the alkaline blood in the Haversian canals, and the constant exudation of alkaline serum from all raw living surfaces, bone included, protect it from the action of such weak acid dilutions as I have hitherto used At any rate, it is a positive fact that the sequestra are dissolved, and the cavity heals, without any perceptible injury to the living bone

No 6 Sixteenth St , Chicago

THE INFLUENCE OF THE DURA MATER IN CAUSING PAIN, REFLEX AND OTHER PHENOMENA, WHEN INJURED OR DISEASED

Read before the Section of Practice of Medicine, Materia Medica and Physiology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY W B FLETCHER, M D,

SUPERINTENDENT OF THE INDIANA HOSPITAL FOR THE INSANE,

The dura mater, the mother membrane of the body according to the ancients, is a much neglected and most important organ, for organ it must be regarded in the human anatomy To the average student and general practitioner the dura is but a tough inelastic, fibrous membrane of unusual thickness, which plays the part of a scaffolding and support for the brain

A careful study of this part, however, shows that it is not only the superstructure upon and in which the brain is built, but that it is an internal periosteum to the skull—a complex channel for the great venous currents through which course, not only the venous blood from the brain, but much from outside the skull,—likewise a soft, serous cover for the membranes of the convolutions and sheath for the cranial nerves It has, furthermore, a small arterial supply, which is gathered from branches of both the external and internal carotids, but is most peculiar in being a most sensitive organ with a greater combination of sensory motor and vasa motor reflexes than any other part of the body The nerves of the dura come from the Casserian ganglion direct, and from the three great branches of the fifth pair With these are combined branches of the facial and a number of sympathetic ganglia relating it to the spinal cord

Van Helmont and others of his school regarded the dura mater as the seat of sensation Marshall Hall (*1841*) was the first to announce that its irritation caused reflex actions In 1872, Dr John C Dalton showed that convulsions or contractions followed irritation of the dura upon the same side These observations have been confirmed by a large number of experimentalists, more particularly by Duret, who injected iodine and other chemical stimulants between the cranium and the dura and produced fracture of the skull at various points

All these experiments were upon lower animals—presumably dogs That the same condition exists in an exaggerated degree when the dura in the human subject is either diseased or injured, is recognized by Duret and others This author, who has written most exhaustively upon the subject, intimates that so much confusion may arise between reflected sense and motion arising from irritation of the dura, as to puzzle the advocates of cerebral localization He says "Certain opponents (of cerebral localization) have adduced these facts to prove that the localized movements, which are determined by the application of the electrodes on the pretended motor centers of the cortex, were in reality due to irritation of these sensory conductors "

I herewith submit a sketch of a few cases which illustrate to some extent the function of the dura as an organ of sensation and reflected motor contractions, first premising my remarks by calling attention to the anatomical points of the scalp and cranium The scalp is not normally acutely sensitive, its cutaneous sensibility is less than other parts of the skin, notwithstanding its sensory nerves are from external branches of the fifth pair of nerves The skull cap, when examined shows many openings, through which emissary veins pass from without inward, as can be plainly seen upon the dura by the numerous spots where these veins have been broken in tearing the fresh calvarium from the brain, through these openings in the skull frequently, but perhaps in abnormal conditions the extremities of the dural branches pass, it is from this, we have occasionally those dreadfully sensitive tumors of the scalp, or the more dreadful tumors of the dura, which Abercrombie, Louis, Wenzel Brothers, Cruveilhier and others, describe as commencing in the dura and making their way through the skull, lifting the scalp and finally breaking into fungoid masses of the most disgusting and painful kind upon the surface These external dural nerves, if I may so name them, also account for the excessively sensitive spots which some persons have upon the scalp, when they must avoid the pressure of even a brush or comb, and arrange the hat for the particular spot I doubt

not that a careful examination in such cases would reveal a sensitive tubercle or clubbed extremity of a nerve

Case 1 M C was admitted to the Indiana Hospital for the Insane in March, 1882 He was irritable, homicidal and suicidal, suffered great pain in the head—at one time so excruciating that he ran at the window bars (an iron grating) with all his force, lacerating the scalp in many places During the war he had been cut along the center of the right parietal by an exploding shell, ploughing a groove into that bone, into this the scalp had healed into a firm adhesive cicatrix With the intention of trephining in this case, a triangular flap was made leaving the scar in the center It was not possible to dissect the scalp up from the old wound, but required a chisel to separate the dense aponeurosis, the old groove was likewise thoroughly scraped Finding no evidence of a fracture and that the direction of the flying fragment was not likely to have caused one on the inner table, further procedure was dispensed with The wound healed in a few days with the result better than could have been expected The pain was gone and the patient while not yet fully recovered, is comfortable, works out of doors in the garden or on the farm, is more social and is considered a "trusty" on the hospital grounds

Case 2 J N, some eight years ago was near a boiler when it exploded, was struck by a fragment on the right parietal near its junction with its fellow and the coronal suture After a period of unconsciousness, he recovered so far as to pursue his vocation, that of a farmer Two years ago he had constant pain in the right side, also several epileptic convulsions followed by slight facial paralysis of the left side, and nearly constant twitching of the right face, neck, arm and hand

In trephining this case, June 26, I found thickened and adherent dura, which was broken up with difficulty causing at the time increased muscular contractions, but when I had cut a slit through the greatly thickened membrane and explored the convolution beneath, even to passing a probe through the cortex of motor centers, no convulsive action was excited, there was an escape of perhaps two drachms of fluid, and more after the operation, but the patient remains to this date free from pain, convulsions or paralysis

In six other cases in which I have trephined in insanity from traumatic causes, a like result, varying in degree as the location varied, was noticed

It is my opinion from the foregoing observations upon the anatomical relations of the dura mater to the skull, that

First, It is frequently the seat of disease or irritation produced by pressure, causing nearly all intra cranial head aches and neuralgias

Second, That disease or injury of the dura through its relations with the vasa motor nerves largely commands the blood supply of the cerebral centers, thereby affecting psychical, motor and reflex functions

Third, That reflex contractions produced by irritation of the dura mater are usually upon the same side of the irritation, but when the irritation is great, symptoms may be manifest upon both sides

Fourth, Great inter cranial pain in the cerebral regions is not an index of disease of those hemispheres, but of the dura mater

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THREE CASES OF SYMPATHETIC OPHTHALMITIS ARRESTED BY EARLY ENUCLEATION OF THE INJURED EYE

Read before the Chicago Medical Society, May 2, 1887

BY F C HOTZ, M D,
OF CHICAGO

A few years ago a writer in the *Archives of Opthalmology* (vol xi, p 209) asserted that it could be definitely settled "that the enucleation of the injured eye does not arrest or shorten the course of sympathetic inflammation" But we need only to begin to look into the literature or to ask the views of several oculists to convince ourselves that the greatest difference of opinion still exists in regard to the propriety of removing the injured eyeball after sympathetic inflammation has started in the other eye Mauthner, for instance, takes the ground that under these circumstances the operation is not only useless, but in certain forms of sympathetic inflammation positively harmful, while Wecker, on the contrary, declares these views are not borne out by clinical facts, and insists that the operation should be performed in the early stage of sympathetic ophthalmitis

When men entertain and express such opposite opinions on a question it certainly cannot be said to be definitely settled, on the contrary, it seems to be still open to a great deal of discussion, and to call for further clinical observations before a definite decision can be arrived at

But to discuss this subject understandingly, it is necessary that our arguments and the clinical facts to sustain them, rest upon the same platform, in other words, it is necessary that we understand each other in reference to what we regard as the early stage of sympathetic ophthalmitis For our views in regard to this malady have recently been undergoing a material transformation, and the term, "the early stage of sympathetic inflammation," may have a different meaning in observations based upon the old views from what it means in observations made under the latest theory

As long as the theory prevailed that the sympathetic inflammation was transmitted by reflex irritation through the ciliary nerves, we naturally looked for the first evidence of sympathetic disturbance in that part of the eyeball upon which the ciliary nerves exert their greatest influence Tenderness of the ciliary region and inflammatory disturbance of the iris were regarded as among the earliest symptoms of sympathetic affection, while cases in which the first evidence of sympathetic disturbance was discovered around the optic papilla, were considered and reported as occasional and rare exceptions But since Dr Arlt (*Archives of Opthalmology*, Vol V, 1876,) has shown the uncommon frequency of inflam

mation of the optic nerve in eyes which had been enucleated on account of sympathetic disturbance in the other eye, clinical observations have been rapidly accumulating to show that the optic nerve plays a very prominent part in the transmission of sympathetic inflammation In fact the evidence has become very strong already that the sympathetic inflammation is usually communicated directly through the optic nerves, and not by reflex action of the ciliary nerves This has been positively demonstrated by Professor Deutchmann (*Graefe's Archiv*, Vol 28, 29, 30 and 31,) in a series of interesting experiments on rabbits for the purpose of proving the infectious nature of the sympathetic opthalmitis He injected the spores of aspergillus fumigatus suspended in a solution of chloride of sodium into the vitreous, the infected eye developed the symptoms of irido choroiditis and the other eye showed, one week after the injection, a marked hyperæmia of the optic disc No further changes occurred, no actual inflammation ensued in the second eye, when one injection only was made in the first eye Deutschmann therefore concluded that the injected spores became encysted too quickly so that they did not incite an inflammation severe and lasting enough to be propagated to the other eye He therefore modified this experiment by repeating the injection four times in twenty-four days in intervals of six days The result was a destructive irido choroiditis in the infected eye, and the development of the following changes in the other eye appearing in the order here mentioned hyperæmia of the disc, papillo retinitis, acute choroiditis, and cloudiness of the vitreous

The sympathetic inflammation induced in these experiments manifested itself first at the optic disc, proceeded then to the retina and the choroid, and finally advanced to the anterior part of the uveal tract, (ciliary body and iris) In other words, that part of the eye which has formerly been regarded as the primary seat of the sympathetic inflammation, the anterior portion of the uveal tract was the last one involved And since we have begun, in all critical cases, giving occasion for apprehending the possibility of sympathetic trouble, to watch the healthy eye with the opthalmoscope instead of looking out for signs of iritis or cyclitis a great number of cases have already been recorded in which the first signs of sympathetic disturbance were noticed in and around the optic disc These clinical observations give additional weight to Deutschmann's experiments, inasmuch as they show that the sympathetic inflammation in the human eye seems to take the same course which he always saw it take in the rabbit's eyes

But if this is the usual course of sympathetic opthalmitis, if we accept the view that it begins at the optic nerve and ends in the iris, it is not difficult to understand why enucleation of the injured eye usually proves of no benefit when it is performed at the first signs of iritis or cyclitis, for it is then undertaken at a period, when the sympathetic inflammation has long passed its incipient stage, acquired such force and intensity that it will run its course independently of the inciting cause, and has inflicted so much destruction upon the interior tissues of the eye that little could be saved should we succeed in promptly arresting the disease

It is therefore obvious that the usually negative results of operations performed at this late period cannot be set up as an argument against the operation, and are not admissible as evidence in the discussion upon the question whether early enucleation can arrest the progress of sympathetic inflammation To settle this question we must take those cases only in which the enucleation was performed when the first signs of sympathetic trouble were discovered by the opthalmoscope A number of such cases are already on record, and the results show that the enucleation performed at this early period can arrest the progress of the sympathetic inflammation and rescue the second eye from destruction and blindness

But as the discussion on this very important question cannot yet be considered closed, I wish to add to the clinical observations already published the following three cases from my own practice

Case 1 —Fragment of steel in the fundus of the left eye, sympathetic optic neuritis of right eye, enucleation, recovery of R E On May 31, 1885, a small fragment from a steel hammer struck the left eye of a young farmer, the next day the eye was very painful, inflamed, and the right eye became very dim

On the 12th of June he arrived in Chicago, and I found the following *status praesens* V = fingers at six feet only, marked pericorneal injection, some pain around the eye, especially at night, in the corner opposite the lower border of the pupil a fine linear scar, only 1 5 millimeters long, and in the lower portion of the iris a small oblique rent, the edges of which appeared retracted and adherent to the lens The pupil was round and of ordinary size, but under the effect of atropine the upper portion only dilated, so that the pupil had the form of a ¾ moon The opthalmoscope disclosed considerable disturbance in the lens in the shape of numerous dark lines forming a cobweb like network in the posterior cortex and extending through the lower portion forward toward the perforation of the iris, (track of foreign body) This obscuration of the lens rendered a free inspection of the fundus impossible Still I could ascertain that the papilla was normal, but a short distance from the optic disc, at its temporal side, my eye caught a bright white reflex as though coming from a small coloboma of the choroid, and at the nasal border of this white patch a blackish substance was dimly visible The vitreous humor did not seem disturbed Right eye normal My diagnosis was that the minute fragment of steel had traveled through the lens and vitreous body, and cutting its way through the retina and choroid, lodged in the sclerotic And the subsequent developments seemed to confirm my diagnosis By keeping the patient perfectly quiet in a dark room and by the use of atropine, I succeeded within a few days in alleviating the ciliary pain and in removing all the inflammatory symptoms

June 18, all inflammation subsided, the track of the steel through the lens very plainly visible, but the obsscuration of the posterior cortex more con

tracted and limited to the area of the posterior pole, and consequently interfering less with the examination of the fundus The white reflex could plainly be seen to proceed from a small oblong patch of exposed sclerotic, located about two disc diameters from the temporal border of, and almost in a horizontal line with the papilla The upper angle of the coloboma of the choroid was occupied by a black body surrounded by hæmorrhagic effusion into the adjacent retina

June 27, extravasation entirely absorbed, form of the coloboma changed, being broader, almost square with obtuse or rounded corners Parallel with and close to the papillary edge of the coloboma was a longitudinal black streak, the lower end of which thickened to a triangular projection out into the vitreous, no change in papilla and other portions of fundus, V = fingers at eight feet

June 28, V much worse to day, lower inner field and central vision abolished Change was noticed last night after patient had been out riding in a buggy Papilla quite red and ill defined, extensive detachment of the retina, three distinct folds, one fold extending from the upper border of the papilla transversely toward the location of the foreign body, a second fold embracing the superior temporal section of the retina, and a third fold the inferior temporal section

July 3, optic disc much redder and swollen, veins greatly distended The retina re attached in most places, only two small short folds of detachment above the traumatic coloboma of the choroid, between this and the papilla numerous small fresh extravasations Right eye normal

July 12, the past two days the patient had been complaining of occasional obscurations of the sight of his right eye, when reading a few minutes it begins to ache and soon afterwards the sight is clouded V = $\frac{20}{20}$ —, but when he reads the test types down from No 200, he has to stop at No 30, optic disc greyish red and its nasal border swollen and indistinct

I expressed it as my opinion that this optic neuritis was undoubtedly the beginning of sympathetic inflammation, and that the left eye should be removed without delay This was done and the enucleated eyeball was put in Muller's fluid for future examination

The right eye began to improve at once after the operation, and on Aug 4, before the patient left the city, the fundus of this eye was found perfectly normal again, V = $\frac{20}{20}$+, and no difficulty in continuous reading

The later examination of the enucleated eye showed that the fragment of steel was suspended in the retina and choroid, and that the white patch I had taken for the exposed sclerotic was an inflammatory exudate around the foreign body

Case 2 —Extensive laceration of eyeball by a piece of glass, secondary subchoroideal hæmorrhage by a blow, incipient optic neuritis, enucleation recovery Sept 7, 1886, James P , a barkeeper, was brought to me Two hours previously he was engaged in opening a pop bottle, it exploded and a piece of the glass cut his left eye in a frightful manner The wound extended from the upper nasal border of the cornea in a curve downwards across the cornea, and beyond its lower border into the sclerotic In the lower portion of the wound vitreous and iris protruded, the pupil was irregular and dilated, lens already opaque After cocainizing the eye, I removed the prolapsed iris and vitreous, washed it thoroughly with corrosive sublimate (1 5000) and no splinters of glass being found, closed the wound by two fine silk sutures, and applied binocular bandage The wound healed up nicely and the eye recovered from this injury—as my note book under Nov 30 states—with a smooth scar to which the nasal portion of the iris was adherent, and with a shrunken cataract, good perception of light in every part of the field, and normal tension Right eye normal with perfect vision

Jan 11, 1887, he returned, two days previously he was accidently struck on this left eye The pain from the blow was so severe that he came very near fainting The eye is very red, exceedingly sensitive to the touch, very soft, (T–2), anterior chamber filled with blood Right eye still shows normal fundus, V = $\frac{20}{20}$ Under fomentations with warm water the pain in left eye subsided, but it rapidly diminished in size, and on the 16th, (seven days after the second accident,) the right eye exhibited the first signs of sympathetic irritation, intolerance of strong light, phosphenes, quivering of the air, and disability to read more than two lines, and the opthalmoscope showed a slight hyperæmia of the papilla

Jan 19, the symptoms in right eye more intensified, dull pain over the eye, papilla very red and its outlines hazy The patient now realizing the gravity of the affection, consented to the enucleation of the left eye which was done at once This eye showed a complete detachment of the retina with corresponding shrinkage of vitreous, and over the nasal side of the sclerotic an extensive detachment of the choroid by a recent blood clot The right eye was quickly relieved from the sympathetic disturbance and recovered its normal function

Case 3 —Laceration of left eye, neuro retinitis and diffuse choroiditis with cloudiness of the vitreous of right eye, enucleation, recovery J J , aged 27, painter, was admitted to the Eye and Ear Infirmary Nov 15, 1886 Six weeks ago he injured his left eye by falling from a scaffolding, the sight was totally destroyed at once The eye has been very painful ever since the injury, and one week ago the sight of the right eye began to get dim I found the left eye very red, soft, tender, reduced in size, and disfigured by a deep scar across the cornea extending at both sides far into the sclerotic (result of the laceration) Right eye was free from pain and redness, its pupil large and regular, but the vitreous so cloudy that fundus could not be inspected, vision reduced to perception of light

The following day the left eye was enucleated, its optic nerve was much inflamed, and its retina completely detached

Three days after the operation the right eye showed symptoms of iritis (pericorneal injection and a few

posterior synechiæ) which however, subsided very readily under the use of duboisine By the beginning of December the vitreous had cleared up, so that the fundus could be plainly seen with the opthalmoscope, it showed the papillla very red, swollen and indistinctly defined, large tracts of the retina opaque white and its veins large and tortuous Repeated opthalmoscopic examinations made during the next two weeks revealed nothing new, except that the neuro retinitls was subsiding, but on Dec 16, when I inspected the fundus again, I was surprised by finding that I could not see it as clearly as I could only two days previously This haziness was caused by numerous fine brown specks which had appeared and settled on the anterior capsule of the lens, they looked exactly like the deposits on the posterior surface of the cornea in iritis serosa, but there were no signs of iritis Deutschmann reported[1] a case in which with a similar condition of the fundus such deposits suddenly appeared on the posterior surface of the cornea without any signs of iritis He at once declared them to be the spores of the neuro organisms, which had incited the sympathetic micro retinitis and had been carried from the vitreous into the anterior chamber In order to prove the correctness of his view, he punctured the cornea under aseptic precautions, withdrew with an aseptic pipette the aqueous humor and transferred it into a culture fluid As the focal illumination found the cornea free from deposits after the puncture, they were evidently washed out with the aqueous humor After thirty-six hours the culture fluid exhibited the typical forms of the staphylococcus pyogenes albus, and a few drops of this fluid injected into the vitreous of a rabbit's eye developed a destructive chronic iridochoroiditis

As the sediment on the anterior capsule of the lens in our case appeared under the same conditions, it seems very plausible that it too consisted of micro organisms, and I now regret that I did not follow Deutschmann's example in performing the experiment

This sediment persisted one week, then the specks gradually decreased in size and number, and in two weeks no trace of them was left And on Jan 16, the last examination of the eye showed clear media, normal retina and papilla, H $\frac{1}{9}$ and V = $\frac{20}{40}$

[1]Græfe's Arch Vol xxx, 3

THE MICROCOCCI OF WOUND INFECTION

BY HORATIO R BIGELOW, M D

OF WASHINGTON, D C

The issue of THE JOURNAL for April 9th contains a report of the proceedings of the Medical Society of the District of Columbia, meeting of February 16, 1887 The discussion of Dr Burnett's paper turned largely to a consideration of the low forms of life in suppuration and putrefaction It was intimated that our knowledge of these germs was extremely limited The question was asked, Is there a microbe of suppuration? As the whole subject is one of pre eminent interest and importance, and as the literature bearing upon it lies scattered through the medical journals of many countries, it may serve a useful purpose to put into tangible form some facts and theories directly related thereto

Dr F J Rosenbach (Wiesbaden, 1884 "Mikro organismen bei den Wundinfectionn krankheiten des Menschen"), writes that there can be no pus without a microorganism, that in all processes of inflammation, with the exception of that occasioned by turpentine, quicksilver and phoshorous, some form of germ is the exciting cause He finds four (4) cocci, in different suppurative conditions, which he cultivated and then tested upon rabbits They produced exactly the same form of inflammation as that from which they were originally taken These forms are the *Micrococcus pyogenes tenuis*, the *Staphylococcus pyogenes aureus* and *albus* and the *Streptococcus pyogenes* The *Micrococcus tenuis* is a mild form, producing local suppuration, with slight fever and no disposition to a phlegmonous condition The *Staphylococcus pyogenes* is found in phlegmonous pus (osteo-myelitis and furunculous inflammations) The *Streptococcus pyogenes*, the *Kettencoccus*[1] of pus formation, is perhaps (according to this author) identical with Pasteur's *microbe en chapelet* and Krause's Kettencoccus It never produces true erysipelas but stands midway between *Traubencoccus*[2] and *Erysipelcoccus* Rosenbach says that no specific bacteria exist in pyæmia, septicæmia and puerperal fever, that these obtain through the workings of the Ketten or Traubencoccus, or more probably through one of the three forms of Rosenbach's "saprogenic microorganisms "

De Bary (Vorlesungen uber Bacterien, Leipzig, 1887) says, that bacteria may be found in the pus of any wound To the diseases caused by bacteria contagia belong the various wound infections, inclusive of those of the puerperal state, and those connected with the formation of pus foci, abscesses of the skin and internal organs, of local abscesses of the skin, furuncles, ulcers, even to severe affections In these affections we find bacterial forms in the infected places in exceptional individual cases, and according to the present views the excellent results of Lister's antiseptic method, that is to say, asepsis and neutralization of excitors of decomposition, furnish indirect proof that they stand in causal relation as excitors of decomposition to the diseases This may happen in one of two ways 1 As a local process, giving rise to suppuration and abscess, or it may be carried by the blood from the local point of infection to distant organs 2 Or at the local point, it may give rise to a non organized poisonous substance, (a true ptomaine, or something equivalent to it, and this may also be carried along in the blood current The *Streptococcus erysipelatis* which Fehleisen (Die Aetiologie des Erysipelas, Berlin, 1883) first demonstrated, but whose presence had been theoretically assumed sometime before by Koch, v Recklinghausen, Lumkowski, Volkmann, Huter, Tillmanns and Orth, has now assumed its specific

[1]Kette, a chain
[2]Traube, a cluster

place in bacteriology, this also may be said of the *Streptococcus febris puerperalis*

The *Staphylococcus pyogenes aureus* plays the most important rôle in pus formation Biologically it has the characteristics of the micrococcus of osteo myelitis indeed it is so hard to distinguish any morphological difference that it is not improbable that they are identical forms, producing in one case severe inflammation, and in another patient a milder form

Passet (Untersuchungen uber die Aetiologie der eitrigen Phlegmone des Menschen, Berlin, 1885) describes a *Staphylococcus pyogenes citreus*, and Kilt (Deutsche Zeitschrift f Thiermed , xii 1) describes a coccus from 0 0002 0 0005 mm in size which he found in the milk of cows with lymphatic inflammation Friedlander (Die Mikrokokken der Pneumonie Fortschritte der Medicin, 1883, 1 Bd s 715) has fully written up the *micrococcus pneumoniæ croposæ* Koch (Die Aetiologie der Tuberkulose Berl klin Woch , 1882) has done an equally valuable service for the bacillus of tuberculosis Whether any pus exist at all without the co operation of some germ is a matter as yet *sub judice*, but one which is being faithfully worked out, and concerning which we are having many learned discussions The experiments which have been made with chemical substances, that produced inflammations, without pus formation, when bacterial influences were kept out, are now being subjected to much criticism, (see Passet) In every degenerative process of the human body, tending to suppurative or putrefactive change, which has been *studied*, certain germs have been discovered, and reasoning from analogy, with a just balancing of probabilities, I am inclined to believe that there can be no pus without its characteristic germ

Laudable pus is that process of change which is rendered harmless in proportion as it is kept free from the contamination of external air—I mean that it will not assume putrefactive and destructive form until its chemical nature has been so altered that the germ, characteristic of this change, can live in it and multiply I do not believe that the coccus of laudable pus can become a factor for evil or change its form, but rather that for some cause the inherent nature of the pus itself becomes changes, and thus becomes a fruitful field for the growth of a more destructive germ Or the germ may have inherent potentiality for evil, awaiting only the proper chemical change to render it active

It is safe to assume the worst at all events, and to guard against a possibility of untowardness was Listerism inaugurated Even when the germ has not been discovered there have been found vegetative changes of equal potency We know of no germ that will not succumb to bichloride of mercury or to the biniodide, and if time shall demonstrate that used in a diluted form that is germicidal they are free from danger to the patient, I cannot see how the first and chief features of the treatment inaugurated by Lister, are any the less worthy of support to day than they were when first made public I have seen a very large amount of surgery, abdominal and general, during my two years and a half in Europe, but I have seen no unhappy results from a lavish use of germicides, *au contraire*, the percentage of recoveries, after even the gravest operations, is wonderfully good Some two months or more ago, I saw Sanger, of Leipsic, do a Freund's operation, and the woman is alive and well to day The advocates of non Listerism seem to have more unfortunate results from the use of germicides than do all of the other surgeons who make use of them

Karlsbad, Germany, April 28, 1887

MEDICAL PROGRESS.

Iodoform Injections in Cystitis —Chandelux recommends an intra vesical injection of an ethereal solution of iodoform in some rebellious cases of cystitis He uses an almost saturated solution, or one containing 13 grams in each 100 grams of ether He had obtained very favorable results in painful cystitis of tubercular origin, and in other cases of long standing, in which urination took place as often as ninety six times in twenty four hours Chronic cystitis often causes a decided thickening of the bladder walls, and by their contraction the capacity diminishes greatly If we attempt to distend the cavity by a tepid injection of boracic acid solution very severe pains are soon produced, the bladder rebels and the liquid is forced out between the sound and the walls of the canal The bladder loses its power to bear a distension of its walls

In employing injections of iodoformed ether, the bladder having previously been emptied by the patient, the distension is seen to take place with a certain degree of ease According to Chandelux's opinion there is an exact balance established between the expansive force of the vapors of the ether and the power of tolerance in the bladder walls, and it is this which constitutes the great superiority of this over all other injections An evident proof of this distension is furnished by the vesicular tympanites, which is revealed by percussion over the pubes The capacity of the bladder can be thus shown as well as by the amount of liquid retained, to increase gradually from day to day The rôle played by the iodoform is considered only secondary, and the author says that it is all rapidly washed out by the urine and never deposited upon the walls as concretions, which might afterward become the origin of calculi The first injections are usually attended with considerable pain —*Lyon Medicale*, June 5, 1887

Pepsin in Chronic Tropical Diarrhœa —Mr George Harrison Young reports three cases of chronic diarrhœa which had proved rebellious to ordinary methods of treatment In each case the treatment was stopped, and the patient placed on a milk diet, a half pint being taken every three hours, and 5 grains of pepsin given four times daily The record of his cases seems to show that great benefit was derived from the use of pepsin Mr Young states that he has used pepsin in a considerable num-

ber of cases, and always with success He claims that this mode of treatment is especially applicable to to that form of diarrhœa in which the motions are large and frothy These cases are due to insufficient digestion and secondary fermentation of the food When this form of disease becomes established astringents are useless and even often injurious Pepsin at once checks the diarrhœa Only milk diet should be allowed, and the pepsin may be given with the milk In typhoid fever, the author claims that pepsin, by increasing digestion and assimilation of food, will thereby lessen the diarrhœa and intestinal irritation, and by so doing will diminish the severity of the disease It is also useful in dysentery occurring in debilitated subjects —*Indian Medical Gazette*, Dec , 1886

TREATMENT OF FURUNCULOSIS —According to DR PALASNE, of Champeaux, the use of the iodide of iron favors the resolution of furuncles, hastens maturation when they are already present, and even prevents their appearance It acts as a microbicide, being eliminated by the glands of the skin and destroying the pathogenic microbe of the affection He usually prescribes Blanchard's pills of the iodide of iron two to four a day (that is to say 10 20 centigrammes of the iodide of iron), and he continues their administration for at least eight days after the last furuncle has disappeared As the iodide of iron is a very unstable compound, we may have to recourse to the following process Take in a glass of water a teaspoonful of preparation No 1 Powdered sugar, 40 grammes, iodized alcohol, 40 drops (mix rapidly, and put into a well corked bottle) Then take immediately a packet of No 2 Iron by hydrogen, 8 centigrammes, sugar q s Without reflecting in any way upon the results published by Palasne, we desire to inform our readers that we have had no personal experience at all as regards the efficacy of this method The remedies which in our hands have been of the greatest value in cases of furunculosis have been 1°, internally, the sulphides, and agents directed towards the general condition of the body 2°, locally, care of the skin, lotions of camphorated alcohol and aqueous sublimate solutions, and finally, applications of red plaster or emplastrum de vigo —*Journ Cutan and Gen-Urin Dis*, August, 1887

SALICIN IN SCARLET FEVER —MR W P MFHARRY, of Belfast, says My experience has convinced me that the pure alkoloid (salicin itself) is by far the best form to administer the willow in this affection If given early, after a free purge, the disease will certainly be arrested, but if the tonsils have become much swollen and hard, or if the pus has formed, nothing will prove effectual, and the disease will run its course In scarlatina, especially in that form known as scarlatina anginosa, salicin is of great value In those cases of simple scarlatina in which the disease is prolonged by the throat complication, salicin immediately effects a cure I have treated during the last three years twenty seven or twenty eight of such cases, and in no instance has failure occurred I do not consider it necessary or prudent to administer it in every case of scarlatina as a routine treatment Salicylate of sodium should not be given, as poisonous symptoms set in when it is administered in large doses to young children I generally give to a child 4 or 5 years of age five grains of salicin every two hours until the temperature becomes normal, afterwards the same quantity three times daily for a few days to prevent a relapse —*British Medical Journal*, July 2, 1887

HYOSCIN IN PARALYSIS AGITANS PROFESSOR W ERB speaks most highly of the usefulness of hyoscin in this form of paralysis He has observed no positive cures obtained by its use, but marked palliation of the symptoms In one case after long use a kind of remission was observed The others were much helped For some hours the patients were able to move their limbs freely and felt much more comfortable The trembling was removed completely in some cases and in others almost so for several hours or for a quarter or half day The usual dose was 2 to 3 milligrams, these small doses often also caused sufficiently marked by effects to prevent their being increased The improvement in the general condition was so much greater than the discomfort of the side effects that the latter were not objected to by the patients The by effects usually noticed where the medicine acted with unusual power or was used in a larger dose than was readily borne were generally a feeling of weakness, drowsiness, heat about the face, dryness in the throat, some dizziness, uncertainty of vision and heaviness of speech —*Therapeutische Monatshefte*, July, 1887

ACTION OF ANTIPYRIN AND STRYCHNIA —M CHOUPPE has recently presented to the Société de Biologie the results of further observations on the joint action of these drugs The convulsions caused by antipyrin differ very much from those caused by strychnia, they are much less tetanic, are not excited by external causes, and affect much less the respiratory muscles, so that asphyxia does not threaten life If in an animal under the influence of antipyrin strychnia in more than a fatal dose be injected strychnia convulsions occur, but a new dose of antipyrin causes them to cease, and antipyrin convulsions, which may last many hours without causing the animal's death, replace them It seems, then, that the two drugs administered in convulsive doses produce an attenuation in the rapidity of the development of convulsive phenomena —*Semaine Médical*, July 20, 1887

ANTIPYRINE IN CHOREA —WOLLNER has been lead to prescribe this drug in chorea by reason of its influence on the nervous derangements incident to rheumatism In the case reported, the attack of chorea followed a sudden disappearance of rheumatic symptoms Sodium salicylate, potassium bromide, and propylamine having been tried in vain, antipyrine was ordered in does of fifteen grains three times a day, a cure was effected in twelve days —*N Y Medical Journal*, July 30, 1887

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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INDICATIONS FOR THE INDUCTION OF PREMATURE LABOR

A few weeks ago DR GEORGE T HARRISON read an admirable paper before the New York County Medical Association on the *Indications for the Induction of Premature Labor*, which is worthy of careful study In general terms it may be said that the object sought in this operation is to give a better prognosis in those cases in which the further continuance of pregnancy, or childbirth at term, involves great dangers to mother or child, or both, by artificial termination of pregnancy at a time when the fœtus is capable of living outside the uterus As the chief danger to the mother, in the performance of the operation, is not, as formerly supposed, the mechanical irritation of the uterus but septic infection, it may be affirmed that, if proper antiseptic precautions be observed, this danger is an avoidable one

The first and most important indication for the operation is furnished by pelvic deformity of a moderate degree Theoretically, this indication is clear enough, but in practice several difficulties may arise in its fulfilment *First*, our means for pelvic measurements are imperfect, and only enable us to approximate to correctness *Second*, the exact period of gestation may be very difficult to determine, in certain cases deviating somewhat from the normal Irregularities especially occur in cases of contracted pelvis, from the fact that the head is prevented from entering the pelvic cavity, and thus certain signs of pregnancy are modified But, having fixed the date of gestation as accurately as possible, we must next decide in what week of pregnancy the induction of artificial labor is indicated The earlier the labor is induced, so much the less danger of injuring the soft parts of the mother, and so much greater the chances that the child will be born alive, but, at the same time, the prospect of the child's continuing to live diminishes in proportion to its prematurity On the contrary, the later the labor is induced, the greater the danger to the mother and child, but the better the prognosis for the survival of the child if living The problem, then, is to choose such time when the child could be born without injury to itself or the mother To do this we must get an accurate idea of the sizes of the pelvis and the child's head

In the flat pelvis, the deformity most frequently met with, we have simply to ascertain the measurement of the conjugate diameter In the equally contracted pelvis the problem is much more intricate Here we must introduce the whole hand into the vagina, in order to form an idea of the pelvic cavity, and errors are difficult to avoid To determine the size of the child's head also presents many difficulties Schroeder showed by careful measurements that the head is larger from the twenty eighth to the fortieth week of gestation than was generally supposed to be the case But it must be remembered that the heads of immature children are much more compressible than those of children at term Other criteria which may serve as guides are the facts that large and powerful women, as a rule, give birth to large children, and that the weight of the child increases with the age of the mother and with the number of preceding births The transverse diameter of the heads of the children of young primiparous women is relatively small, while the contrary is true in multiparæ who are comparatively old The method proposed by Frankenhauser and Roth of determining the relation between the head of the fœtus and the pelvis of the mother, is worthy of trial This consists in passing the child's head into the pelvis and, by means of the fingers in the vagina, ascertaining if it be possible for the head to descend below the brim This examination should be repeated every eight days, and operative interference should be resorted to only when the descent of the head below the brim seems no longer possible

As to the degree of pelvic contraction which justifies a resort to the induction of premature labor, Dr Harrison believes that in the simple flat pelvis a conjugate diameter of 7 5 cm , or 7 cm in very exceptional cases, should be the extreme limit In the equally contracted pelvis, when the shortest diameter is at least 8 cm , it may be said that the operation is justifiable As a rule, the thirty sixth week of preg-

nancy is to be selected, and only exceptionally should the term of gestation be anticipated by operating in the thirty fourth week

An indication for inducing premature labor is also given by certain severe diseases which endanger the mother's life and are amenable to no other treatment, while, on the other hand, either a cessation or an amelioration of the symptoms may be expected with the termination of pregnancy Among such affections is uncontrollable vomiting appearing late in pregnancy Occasionally it is so severe that operative interference is imperatively demanded Another disease which may indicate the operation is nephritis, though a distinction must be made between cases in which the anatomical and functional renal disturbances are evoked by the pregnancy, and those in which the disease is an interstitial or parenchymatous nephritis, which either existed prior to conception or was produced during the course of gestation As to the induction of premature labor to prevent eclampsia, Dr Harrison believes the indication clear and decided when the urine shows a constantly increasing quantity of albumin and fatty-degenerated cells, and when all other resources prove unavailing Again, excessive œdema and transudation into the serous cavities may demand the operation To diagnosticate between the two forms of nephritis referred to, *nephritis gravidarum* and *nephritis in gravitate*, is no easy task The clinical phenomena are so nearly alike that the previous history of the case and the course it took can alone decide as to which form is present in a given case It has been abundantly shown that in chronic nephritis in pregnant women there is a great tendency to abortion and premature labor, and not so much to attacks of eclampsia

A third indication for the induction of premature labor in the interest of the child, is met with in certain cases in which experience has shown that the children died at a certain date of gestation, when this time was not far removed from the end of pregnancy Some cases of *nephritis gravidarum* come under this category If syphilis be the cause of death of the fœtus, the artificial interruption of pregnancy Dr Harrison thinks is contra-indicated, for, according to Kassowitz, in latent syphilis of the father or mother the death of the fœtus takes place in each ensuing pregnancy somewhat later, so that in successive pregnancies these are first abortive fruits, then immature macerated, then prematurely born macerated, and finally mature, but diseased children, still later, mature healthy children On the other hand, we gain nothing by the artificial induction of pregnancy before the expected time of the death of the fœtus, for the child is already diseased, and may be considered as lost In cases, however, in which chlorosis or anæmia of the mother, or changes in the umbilical cord or placenta, have caused the death of the fœtus, the induction of premature labor before the critical period may be the means of securing a living child

It is rare that diseases of the heart or lungs give an indication for this operation, though they occasionally do Lastly, an indication for the induction of premature labor is furnished by those dangerous and incurable diseases of the mother which would probably cause death before the end of pregnancy, in order to avoid the Cæsarean section *post mortem* or *in articulo mortis*

DANGERS OF SALTS OF LIME

DR ARNOZAN, of Bordeaux, lately made a communication to the Medical Society of that city on the dangers of submitting children to the prolonged use of salts of lime He reported the case of a youth 14 years of age, who was affected with coxalgia, and who for six months took two table spoonfuls of a solution of hydrochloro phosphate of lime, a patent medicine, 20 grams of which contain one gram of the salt During this period the patient had, at a few days interval, three attacks of nephritic colic, characterized by vomiting and by very slight renal pains, the diagnosis of the nature of the colic would have been very difficult had it not been for the rejection ultimately of three small calculi during micturition The phosphatic medication was immediately suspended The nephritic colic did not return, and during three months there was no sign whatever of renal lithiasis The coxalgia appeared to be cured and the patient, although a little emaciated, did not present any lesion whatever of the internal organs

The most voluminous of the three calculi that were expelled was examined It was the size of a hemp seed, of a whitish grey color, the surface slightly rugose, and, weighed at the time 25 miligrams At the moment of rejection, the calculus was a great deal more voluminous Independent of a few traces of organic matter it was composed solely of the phosphate of lime This composition, the author remarked, is rather exceptional, adding that doubtless the phosphates are not rare in renal concretions, but they are not alone, and are generally found united with lithic acid or with lithic salts In the case under notice, on the contrary, the phosphate of lime was the only mineral element in the calculus

From an etiological point of view, says the author,

it is impossible not to incriminate the medication followed by the patient The composition of the calculus submitted to analysis, its formation in the youth who had no hereditary predisposition whatever to gravel and who absorbed considerable quantities of phosphates, the non reproduction of nephritic colic as soon as the medicine was discontinued all these circumstances put together do not appear to leave much room for doubt It must, however, be acknowledged that the immobilisation to which the patient was subjected might have favored the development of lithiasis, and no argument can be deduced from a single example against phosphatic medication, so excellent in a large number of cases Dr Arnazan suggests that the examination of the urine of patients submitted to the use of phosphates may furnish useful indications for the moment when it would be necessary to suspend momentarily, or altogether, the medication, and whether, particularly in immobilised patients, it would not be better to substitute the phosphates of soda and of potash for the phosphates of lime

THE "GOOD STANDING" OF MEDICAL COLLEGES — The brief comments we made on this subject in connection with a resolution recently adopted by the Illinois State Board of Health, have brought to our table a shower of questions Some of them are accompanied by names of members of the profession worthy of full attention, while others are anonymous and worthy of little notice Two of the more important of these questions, viz "Is the regulation of the practice of medicine by law desirable, and if so, who shall decide upon the qualifications and conditions required?" were answered directly and clearly in the editorial columns of THE JOURNAL for March 12, 1887, p 295–6, and for March 19, p 322–3 But for a more full consideration of the whole important subject our readers must wait until the more pressing work of the next thirty days has been accomplished Until then we will keep their questions on file

RAILWAY RATES TO THE CONGRESS, EXTENSION OF TIME —We would call the attention of the readers of THE JOURNAL living west of the Ohio River, who intend going to the meeing of the International Medical Congress next month, to the advertisement on advertising page 11 in last week's issue of THE JOURNAL, in regard to the facilities and equipment of the Baltimore & Ohio Railway

We also wish to state that inasmuch as the Trunk Line Traffic Association has allowed an extension for return tickets, used by those attending the Congress, until September 20, the Baltimore & Ohio Railway has also arranged to extend the time of all return tickets over their line to the same date, thus enabling those who wish to do so to visit New York, Boston, the seashore, and other points after the Congress adjourns This information is later than that under the department of "International Medical Congress," on a subsequent page

SOCIETY PROCEEDINGS

AMERICAN OTOLOGICAL ASSOCIATION

Twentieth Annual Meeting, held on Tuesday, July 19, 1887, at the Pequot House, New London, Conn

(*Concluded from page 184*)

A paper entitled, *Desquamative Inflammation of the Middle Ear, with remarks* by Dr O D Pomeroy, of New York, was read by title

DR E E HOLT, of Portland, Me, read a paper on

AN EFFICIENT POWDER BLOWER, WITH REMARKS ON THE USE OF POWDER IN THE TREATMENT OF DISEASES OF THE EAR

The powder blower consists of six or eight inches of small glass tubing to which is attached about fifteen inches of rubber tubing The glass tube is plunged into the powder until a sufficient amount is introduced into it The powder is gently drawn into the proximal end of the glass tube The distal extremity is then placed in the speculum and the powder blown into the ear By drawing the powder from the distal end before blowing it, it is carried *en masse* to the desired point and applied evenly to all parts The instrument can be used with great facility After trying various powders, boric acid has been found the most efficient in the largest number of cases One of the first cases in which the author had used this powder was one in which treatment for over two years had failed to cure a suppurative otitis media Upon the application of the powdered boric acid the discharge ceased and has not returned, a period of five years Cleanliness before using the powder is essential A comparison of cases of chronic suppurative otitis media treated with boric acid and with those treated without this agent, led to the conclusion, that while the discharge from the ear ceased much earlier when the powder is used, yet perforations in the drum head heal less frequently

DR SAMUEL THEOBALD, of Baltimore, exhibited a powder blower similar to that of Dr Holt, with the exception that the glass tube was substituted by a goose quill and that the rubber tube was furnished with a mouth piece consisting of a quill The powder is introduced into the quill and by shaking brought to the proximal extremity of the tube, the object being that it shall be thrown into the ear in the form of a cloud

DR WM W SLEIY, of Cincinnati, had never seen any benefit from blowing powders into the ear He had seen good results only when the powder was packed into the canal He now rarely used the powder in any way

DR B ALEXANDER RANDALL, of Philadelphia In treating a number of cases of purulent discharge which had continued from five to fifteen years and in which the discharge had been pretty continuous and fetid, I have cleansed the canal and used boric acid, at first blowing it in lightly and finally filling the canal pretty full without packing Within a few days the powder is dissolved and the discharge is usually diminished in quantity and the odor is lost

DR H KNAPP In acute cases of otorrhœa, I use boracic acid as antiseptic and cleansing powder The patient is directed to cleanse the ear with the syringe three times a day The powder is then introduced by means of a spoon until the canal is loosely filled If the powder becomes moist the patient is directed to syringe the ear and renew the application The majority of acute cases do not require any other treatment In chronic cases I remove any polypoid growth or any carious bone that may be present, and then use alcohol in fifty or sixty per cent strength, or absolute, with sulpho carbolate of zinc and change that with nitrate of silver I continue this treatment until the ear is dry and there is no discharge, and direct the patient to do nothing beyond using a light cotton plug to filter the air

DR C R AGNEW In using fluid applications in the treatment of these cases I have employed a procedure which may be new to some of the members After cleansing the ear in which I want to diffuse a fluid application as much as possible, I turn that ear uppermost and fill the external canal with the solution Then I insert the nozzle of the Politzer apparatus into the external canal and make pressure diffusing the liquid to all parts of the ear and making in appear in some cases in the pharynx This sometimes may be of value

DR SAMUEL THEOBALD I have never seen any direct harm follow the use of boracic acid In cases of suppuration with a small or moderate sized perforation, I have seen it dry up the discharge and leave the perforation larger than before its use In such cases, I prefer solutions In acute cases, my practice is to always use solutions Where the drum membrane is practically gone, with a granular condition of the mucous membrane, the use of boracic acid powder is indicated I have never found it necessary to pack the canal One puff of the powder blower fills the canal sufficiently full

DR H KNAPP In acute suppurative otitis which is certainly of bacterial origin, I use boric acid largely on account of its drying properties Suppuration, fermentation and decomposition do not take place where a part is kept dry As soon as the boric acid becomes moist I have it removed For acute cases I know nothing better than this method of treatment

DR EMIL GRUENING I should like to make a few remarks with reference to three cases which I have already mentioned In these cases I attributed the fatal result to the use of powder which was boracic acid The first case was that of a girl 19 years old who had otitis as a result of the use of the nasal douche She was advised to use powders In a few days she began to suffer with headache, dizziness and intense tenderness on one side of the head and slight puffiness in the region of the mastoid I saw the patient after she had become comatose I found the tympanic membrane bulging, it was injected, and there was a slight tit-like projection and in this there was an opening filled with powder The pus which formed in the middle ear escaped through the Eustachian tube I made an opening in the membrane and cleaned it out carefully and advised the family physician to open the mastoid He did so and found the mastoid cells filled with pus The patient recovered consciousness but died the next day from heart failure The second case was that of a lady 70 years of age who had otitis media with perforation A powder was applied by a general physician and a few hours later she began to suffer with intense headache Symptoms of meningitis appeared and I was called in I found a small opening in the membrane occluded with powder I made an opening, but the patient died of meningitis The third case was that of a child with long standing otitis media, and destruction of both membranes This is the only case in which the powder had been packed After the ears had been packed the child had repeated chills I was called in and removed the plugs which were hard concrete masses and were taken away with difficulty In spite of the removal of the powder the child died with all the symptoms of pyæmia

DR D B ST JOHN ROOSA I think that in a large percentage of cases acute inflammation of the middle ear is a self limited affection I try to secure cleanliness and then dry the parts I do not use the dryness as a means of destroying the germs or preventing them from acting, for I do not believe in the germ theory of disease I think that germs are the products and not the causes of disease I think that they retard recovery and therefore should be removed In a large proportion of the acute cases the only treatment required is irrigation with warm water pro re nata and drying afterwards I believe that the pus has a chemical quality apart from the presence of germs which renders it corrosive I therefore try to keep the parts as free from pus as possible

DR CHARLES H BURNETT, of Philadelphia, reported

AN EXAMINATION OF FIFTEEN DEAF MUTES BY MEANS OF J A MALONEY'S OTOPHONE

The cases examined were pupils in the Pennsylvania Institution for the Deaf and Dumb, Philadelphia, and were between the ages of 12 and 21 years The cases were divided into three classes 1, congenital cases, 2, those losing their hearing between the ages of 1 and 5 years, 3 cases of profound hardness of hearing, but who still hear a little and can talk—so-called semi mutes The method of pracedure was as follows five vowels were written and pointed out and the time of their repetition three

times in succession through the otophone by Mr Maloney The pupil was then told to indicate which vowel was spoken when Mr Maloney made another repetition, care being taken to mix about in the tests The words Philadelphia, Mississippi, Burlington, Missouri, boy, baby, papa, and mama, were also used as tests, as well as the consonants Hearing was excited in every instance, but fourteen of the fifteen cases gave ample evidence of hearing by their successful indications with the pointer as the different tests were repeated in their ears It was noted that the results were not as good with the acquired cases as in the so called congenital cases of deafness This may be due to the fact that the process productive of the acquired form is more violent, involving the internal ear, as in spotted fever, than in congenital cases which generally give evidence of being simply catarrhal in their origin and affect the middle ear but not the internal auditory organ In the case of semi mutes the results were especially satisfactory as they heard nearly everything said to them and returned intelligent answers to the questions In such cases both the remaining hearing and the articulation could in all probability be improved by the systematic employment of such an instrument as the otophone as a means of instruction, the best results being obtainable where the instruction is begun early in life

A paper with the same title, presented by Dr F B Loring, of Washington, in the absence of the author, was read by title

Drs H L Morse, of Boston, and B Alexander Randall, presented a series of *Photographic Illustrations of the Anatomy of the Human Ear*

Dr Samuel Sexton reported an

EXCISION OF THE OSSICLES OF THE DRUM OF THE EAR FOR CHRONIC PURULENT INFLAMMATION OF THE MIDDLE EAR TRACT

Since bringing this subject to the attention of the Society one year ago, the writer has continued the practice with satisfactory results, and presented some further observations based upon the records of nineteen operations Of these nineteen cases thirteen were females and six were males Seven cases were between 5 and 12 years of age, eight were between 13 and 20 years of age, and four were between 13 and 40 years of age The left ear was affected in eleven cases cases, the right ear in eight In two cases both ears were the seat of suppurative inflammation, and in one there had been a mastoid abscess In the majority of cases there had been a history of recurrent aural catarrh for a long time, attended with pain in the ear There was much deafness and distressing acoustic phenomena, as autophonia and the like The discharge was usually offensive The general health of most of the patients was fair In all cases the drum head was greatly impaired, the membrana vibrans being usually almost entirely gone, in most of the cases the membrana flaccida alone remained, perhaps with some portion of the membrana vibrans attached Where any of the latter remained it was liable to be found connected by bands to the inner wall of the tympanum Sometimes a sinus of greater or less size opened through these diseased structures into the attic The membrana flaccida, together with the membranous and ligamentous attachment of the ossicles generally held the latter in place even after the most extensive suppuration had long existed Under these circumstances drainage was extremely likely to be interfered with The manubrium and cicatricial structures depending from the auditory plate were frequently found adherent to the inner wall of the tympanum, while the attic and antrum were lined with much thickened mucous membrane Some portion of the middle ear tract was found to present more or less carious bony surface In some instances the ossicles themselves were carious or anchylosed In several of the cases the malleus handle was adherent to the inner wall of the drum In some only a necrosed stump remained In some the malleus and incus were adherent to each other The incus was less liable to caries The stapes cannot be so well examined as the other bones, since it is never removed In some of the cases the operation was not resorted to until months or years after ordinary methods of treatment had been unsuccessfully resorted to

Without going into all the details of the operation, the author said that experience had shown that it may be performed much more rapidly than was at first supposed The first operations required an hour, the later ones not more than fifteen minutes To the protracted operation he attributed more disagreeable symptoms, such as nausea, which had not been presented by the later cases The remaining fragments of the drum-head are everywhere detached from the tympanic ring with a slender trowel-shaped knife The malleus is then freed from its attachments, including the tensor tympani muscle, by one or more sweeps of the knife After all blood is removed the long process of the incus is separated from the stapes, if it be connected with that bone The malleus handle is separated from the inner wall of the canal, if it has been attached The malleus handle is seized with stout forceps as high as possible and gradually detached and brought away The removal of the incus is more difficult, since its long process is likely to be swept from view With a little patience, however, the bone may be soon found and its removal is then a simple matter When lying in the attic, the scraper may be of service in bringing it down In most instances he no longer divides the chorda tympani In some cases where the ossicles were very adherent, considerable force was necessary to detach them, and in one instance this was impossible After the operation the drum should be carefully dried with cotton, and ten drops of a four per cent solution of cocaine may be instilled This is usually unnecessary Usually very little or no reaction follows the operation until a little time after the menstrual period

In the nineteen cases both malleus and incus were removed in ten In one the body of the incus alone was removed In six cases the malleus only was excised When possible it is well to clear the drum of granulation tissue by treatment before the operation, since less hæmorrhage will then be encountered

The duration of treatment after the operation was, in five cases, one month, in two, two months, in one, six months, and of the other nine cases, three were unimproved, one failed to continue treatment, and five are yet under observation Nine cases progressed steadily to a complete cure, six were much improved, three were unimproved, and one failed to continue treatment Many of these were dispensary patients, under bad physical conditions A marked improvement in hearing occurred in nearly all cases In the cases noted as cured it increased 75 or 100 per cent, as far as testing with voice was concerned

This marked improvement in hearing was unexpected, and gave rise to the conjecture that we may recommend the operation for deafness alone in many cases where the drum is obstructed by the results of chronic purulent inflammation, although all discharge may have ceased

Reproduction of the drum head never took place Among the results of the operation may be mentioned the prevention of recurrent accumulations of purulent matter in the attic and antrum The general health was nearly always improved In two phthisical cases the cough was lessened in one and ceased in the other, while both gained much in weight In children the effect on health was most marked

The operation is performed with the patient upon the back and under ether narcosis The electric light is almost essential Magnifying lenses introduced into the speculum are of service The after-treatment consists in keeping down granulation tissue and aiding in the transformation of the mucous lining into a dermoid condition A meddlesome plan of treatment is undesirable Where a large secreting tract exists a cure is sometimes almost impracticable Alcohol has not been found useful in treating granulation tissue Salicylic acid and boric acid have done good in a few cases The peroxide of hydrogen has its use in certain cases The persistence of discharge after operation may be expected in catarrhal and run down subjects, especially where caries of the bone exists

EVENING SESSION

A case of Rapid and Almost Total Loss of Hearing in a Child 7 years of age, Inherited Syphilis Apparently the Cause, Marked Improvement following the use of Iodide of Potassium, by Dr A H Buck, of New York, was read by title

DR SAMUEL THEOBALD reported a case of

SYPHILITIC DISEASE OF THE LABYRINTH,

exhibiting remarkable variations in the degree of deafness The patient was a man about thirty four years of age, the subject of inherited syphilis In one ear the deafness was nearly complete, and in this ear there was but little variation In the other ear frequent and sudden relapses occurred, after the hearing on several occasions had been brought up almost to the normal standard Within twenty-four hours the hearing would fall from the ability to distinguish words in a whisper at twenty inches, to a degree of deafness which would require the same words to be spoken in a loud voice Iodide of potassium was given with but little effect, but decided benefit resulted from the administration of bichloride of mercury in combination with muriate of ammonia

EXECUTIVE SESSION

The following were elected to membership Drs C J Lundy, of Detroit, W H Hotchkiss, of New Haven, H D Risley, of Philadelphia, David De Beck, of Cincinnati

OFFICERS FOR ENSUING YEAR

President—Dr J S Prout, of Brooklyn

Vice President—Dr George C Harlan, of Philadelphia

Secretary and Treasurer—Dr J J B Vermyne, of New Bedford, Mass

Representative to Executive Committee of Congress of American Physicians and Surgeons, Dr C R Agnew, of New York Alternate, Dr Wm H Carmalt, of New Haven

The Society then adjourned to meet at New London, Conn, July 19, 1888

AMERICAN OPHTHALMOLOGICAL SOCIETY

Twenty third Annual Meeting, held in New London, Conn, July 20 and 21, 1887

(*Continued from page 186*)

EVENING SESSION

DR W F NORRIS, of Philadelphia, reported some

CASES OF ACUTE PRIMARY GLAUCOMA, OF HÆMORRHAGIC GLAUCOMA, AND OF SECONDARY GLAUCOMA

Case 1—A married woman, aged 52 years, was admitted to the hospital with acute glaucoma of the left eye The attack was of twelve days' duration Vision was much impaired The right eye was entirely quiet and presented a narrow iridectomy upwards In August, 1875, a severe attack of glaucoma had suddenly occurred in the right eye, and on the fifth day iridectomy had been performed Since then the eye had given no trouble When admitted to the hospital, the patient was in a feeble condition She was put to bed, a leech applied and eserine instilled The eye improved and became quieter The cloudiness of the cornea and the other symptoms remaining, iridectomy was performed twenty-eight days from the commencement of the attack A year later, she had a severe attack of pain not relieved by eserine, and sclerotomy was performed The eye continued to give trouble from time to time, and it finally became necessary to enucleate it

Case 2—Miss B, aged 70 years, was seen in February, 1867, with marked hæmorrhagic retinitis and incipient cortical cataract She stated that she had a sudden loss of vision two years previously The present attack of loss of vision came on suddenly ten days before, when the patient was stooping Examination showed numerous hæmorrhages into the

retina. One month later, the right eye was more cloudy, the tension increased, and there was some hemorrhage into the anterior chamber Iridectomy was then performed The wound did well until the fourth day, when there was a sudden attack of pain On the ninth day, apparently without exciting cause, this symptom recurred After this there would be an exacerbation every few days The eyeball was subsequently enucleated, the patient dying a year or two later with apoplexy

Case 3—A man aged 66 had been operated on for cataract in both eyes some time before coming under observation This had been done in England, both operations having been successful Some eighteen months later, the right eye had been operated on by a needle operation, and since then it had not been free from irritation When seen, the right had lost the perception of light, and the left eye presented signs of sympathetic irritation The right eye was enucleated, and this relieved the irritation in the left eye The patient now sees fairly well

Dr H D Noyes said that in a case reported last year, dying on the fifth day, perfect approximation was prevented at one end of the incision by swelling of the scleral lip of the wound, which was double the thickness of the corneal lip Into the space so left the iris had been forced, thus illustrating the beginning of a cystoid cicatrix

Dr H Knapp asked whether the swelling of the scleral lip might not be due to the previous incarceration of the iris in the wound?

Dr Noyes believed that the use of the spatula in dressing the wound had left it free from iris

Dr B A Randall said that in Dr Noyes's case the anterior chamber must have been obliterated and the posterior capsule pushed forward, for the sections showed pigment attached to the posterior capsule

Dr B Alexander Randall, of Philadelphia, presented the notes of a case of

SARCOMA OF THE EYELID, SIMULATING MEIBOMIAN CYST,

occurring in a man about 41 years of age, who came under observation in 1885, with the history of two operations in the previous three years for the removal of a cyst The tumor had the position, size, color and apparent *fluctuation* of a chalazion, but a vague grayness suggested pigmentation, and led to its total removal by a V shaped incision through all the tissues of the lid Section proved the tumor to be a solid encapsuled sarcoma of large spindle cells The patient passed out of sight for two years, and then returned with recurrence very like the origin, which had been treated in the interim as chalazion The outer half of the lid had now to be removed, and the tumor was found to be of the same nature as before and again encapsuled The meibomian glands at both operations seemed to be entirely normal, and the tarsus was entirely uninvolved

Dr Randall also presented some cases of

CILIO RETINAL VESSELS,

with the remark that they were far from rare, and that the occurrence of such an origin of even a principal artery or vein, supplying different quadrants of the retina, had come to notice

Dr Randall called attention to the

HORI SCHNITT OF V JAEGER IN CATARACT EXTRACTION

as differing in no essential from the modified linear extraction, except in the knife with which it is made He asked attention to the knife, with the claim that with it almost all the usual modifications of the linear extraction could be made, but that no aqueous need be lost until the completion of the incision, and consequently that the cut could be made more safely and smoothly than was possible with the Graefe knife

Dr Knapp had used Jaeger's knife, but thought it harder to manage because of its greater size With the Graefe knife one can withdraw slightly and rectify any mistake in the position of the counter puncture

Dr H D Noyes agreed with the last speaker as to the superiority of the Graefe knife He had long practised a manœuvre which he found Panas also employed after making the counter-puncture, the handle is rather depressed, so as first to make the portion of the section adjacent to the counter puncture This quickly carries the cutting edge of the knife to the border of the anterior chamber, where the iris can no longer fall before it Then the handle of the knife is raised as the section is completed

Dr S Theobald, of Baltimore, thought the greater convenience of the narrow knife due to the fact that with it we can first make the counter puncture, and afterward complete the section, with the broad knife both must be done at once

Dr Randall said that if the puncture is made right, with the knife in the proper position, the counter-puncture must of necessity be right also, and the incision made is perfectly smooth

Dr Knapp thought that a broad knife acts more as a chisel, tending to push the cornea before it

Dr E Gruening was of the opinion that the difficulty about making a counter puncture is that its location is not seen, and when an attempt is made to correct its position, aqueous escapes and the iris is apt to fall before the knife

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Thursday, July 21—Second Day

Dr H D Noyes, of New York, reported a

CASE OF GLIOMA OF THE RETINA

The patient, a child, was first seen when 15 months old The eye was enucleated and microscopical examination confirmed the diagnosis of glioma which was made prior to operation The patient was again seen fourteen and one half years later, when 16 years of age An artificial eye had been worn There was not the slightest evidence of a return of the disease

PSEUDO GLIOMA

This case was reported on account of the interest connected with the diagnosis It was difficult to say positively whether or not there was an intra ocular tumor The case was examined by Dr H Knight and the author, and a diagnosis of inflammatory trouble was made Enucleation was advised on account

of the doubt as to the correctness of the diagnosis, and even if the affection was purely inflammatory, enucleation was the wisest plan in view of future possibilities The patient was a boy aged 5 years, who in November, 1886, had fallen from his velocipede, the handle of the machine causing a wound of the left cheek under the orbit There was no apparent injury to the eye, and during the following winter there was no trouble On May 4, 1887, he was first seen by the author There was at this time a cicatrix one inch below the border of the left orbit No irregularity of the orbital edge could be detected, and pressure on the globe caused no pain The movements of the eye were normal and the pupil active, the iris had a slightly greenish hue An extremely vascular growth was seen with ease This seemed to fill the fundus After consultation it was deemed advisable to enucleate the eye This was done, the wound healing promptly Examination showed that there had been cyclitis with inflammation of the vitreous, with the production of inflammatory tissue extending across the eye behind the lens, forming a perfect septum The retina was totally detached and the choroid was partially detached There was also marked hypertrophy of the tissues at the base of the orbit It was thought that the original process had been an injury to the floor of the orbit

DR NOYES also reported a case of

PROLAPSE OF THE LACHRYMAL GLAND

C S, aged 20 years, consulted him on account of a swelling in the upper lid of the right eye This had been growing for nine years It could be freely moved over the globe an moved with movements of the eyeball There was no history of injury or of inflammation of the eye The mass was removed and found to be a displaced lachrymal gland The removal has been followed by no unpleasant effects Four cases of displacement of the lachrymal gland are on record

OPERATION FOR THE RELIEF OF ENTROPION OF THE LOWER LYLID

While in theory the operations for the relief of this condition are very simple, yet in practice they often fail to accomplish the desired end The author then described an expedient which he had employed four years ago He excised a piece of skin below the border of the lid and then dissected up a flap, leaving an open wound He next freshened a spot on the outer border of the lower lid, taking out a piece of conjunctiva He then turned the flap upward and attached it to the freshened surface This little flap served to hold the lid in a position of eversion In one week the stitches were removed The patient then disappeared and was not seen for four years It was then found that the lid remained in a natural position The little bridge of skin was still present, and under it there was a sinus through which a probe could be passed The piece of skin was divided and the result was perfect

DR SAMUEL THEOBALD In connection with the case of glioma, I would mention one that has gone nine and one half years without a return The only weak point in the case is that no microscopical examination was made The macroscopical appearances were, however, characteristic The operation was done when the boy was 6 years of age The boy is still perfectly well and there is no suggestion of the return of the disease

DR H KNAPP Until lately I have held the view that there was such a thing as the permanent cure of glioma, but now I am very doubtful if this is ever accomplished There are exceptional cases which do not terminate fatally until ten or fourteen years after operation They then die from a return of the local disease or else from a generalization of the condition Graefe said that all of these cases died

DR EMIL GRUENING I have seen two cases in which there has been an apparent immunity from the return of glioma The first case was operated on in 1875, the patient was a girl 5 years of age The optic nerve was not involved The girl is still under observation and in perfect health The second case, a child 1 year old, was operated on in May, 1880 It was a case of true glioma, with no involvement of the optic nerve The child is still perfectly healthy Both of these patients have been wearing artificial eyes since the operation

DR JOHN GREEN, of St Louis I have found most of the operations for entropion of the lower lid unsatisfactory I have in a general way followed Panas' recommendation of making an incision below and bringing the lid down by the use of sutures I have extended this operation by the following procedure After inserting the sutures, I make a cut a little inside of the border of the lid, carrying it through the whole thickness of the tarsal fibrous tissue When this is done the sutures are much more effective, and I find that there is no tendency for cicatricial contraction to occur in the process of healing The results obtained by this method have been eminently more satisfactory than those obtained by any other procedure

DR W F MITTENDORF, of New York, reported a

PHENOMENAL PULSATION OF THE INTERIOR OF THE EYE

The patient, 15 years of age came under observation for asthenopic trouble He showed no signs of disease The tension of the eye was normal and the fundus was normal There was no pulsation of the arteries or veins, but pulsation could be induced by pressure A short distance above the disc there was a grayish-white band stretching from one vein to another, and looking like a little sac filled with fluid It presented distinct pulsations, which corresponded with the cardiac pulsations The patient was seen a number of times, and the appearance was always the same A little higher up and more to the nasal side there was a similar band connected with an artery This did not pulsate except when pressure was made It was thought that the band was composed of connective tissue, which was thrown into vibration by the meeting of the vibration of the two veins with which it was connected

DR LUCIEN HOWE, of Buffalo, read a paper on

INCREASE OF BLINDNESS IN THE UNITED STATES

Attention was called to the fact that, while the population during the ten years from 1870 to 1880 increased at the rate of 30 per cent, blindness during the same time increased over 140 per cent By means of a diagram this percentage of increase in each State separately was shown The statistics also show that blindness increased in an almost constant ratio from north to south in the United States, and that it decreased in the same way from east to west This was also shown by colored maps As for the causes, contagion was found to exercise the most important influence Immigration was also considered as an important factor in view of the large number of contagious diseases of the eye introduced every year into the country, and the laxity or absence of quarantine regulations regarding them As for the prevention, suggestions were offered, *first*, as to the care of newborn children, *second*, the isolation of suspicious cases in residential schools and other institutions, even for adults also, *third*, the instruction of the public as to the advisability of guarding against contagious forms of disease

In connection with this matter, Dr Howe offered the following

WHEREAS, The census reports indicate that there has been an increase in the number of blind in the United States, more than four times as great as that of the total population, and

WHEREAS, An inquiry as to the causes of this shows that it is largely due to contagious diseases of the eye, therefore

Resolved, That a committee of three be appointed to examine further as to this apparent increase, and recommend means for its prevention

Resolved, That the President of the United States and the Secretary of State be respectfully requested to furnish this committee with whatever letters or other recommendations may be necessary to further their investigations in this country or elsewhere

Resolved, That the officials in charge of residential schools and similar institutions also be requested to assist the committee to any extent in their power

These resolutions were adopted, and the President appointed Dr Lucien Howe, of Buffalo, as chairman of the committee, the other members to be appointed subsequently

(*To be concluded*)

CHICAGO MEDICAL SOCIETY

Stated Meeting, May 2, 1887

DR F C HOTZ read a paper on

THREE CASES OF SYMPATHETIC OPHTHALMIA ARRESTED BY EARLY ENUCLEATION OF THE INJURED EYE

(See page 202)

DR FRANKLIN COLEMAN The point that Dr Hotz has taken up is one of the most interesting in regard to sympathetic ophtalmitis The necessity for enucleation is very definitely settled when the second eye is in an irritable condition One objection to enucleation is death I have lost one case from meningitis after enucleating an eye, with ophthalmitis I do not think deformity should be taken into consideration Out of seven cases of sympathetic ophthalmia five improved after enucleation of the exciting eye I have never seen an unfavorable result to vision follow I have not seen the second eye get any worse after operation on the first and I have not seen an eye with sympathetic ophthalmia get better without operation McKenzie fifty years ago, before enucleation was practiced, said he never saw an eye recover from sympathetic ophthalmia I wish to ask Dr Hotz whether he thinks that microorganisms generally produce sympathetic ophthalmia? If so, when the organisms have traveled from the first eye to the second, how would it benefit the *second* eye to remove the first?

DR W T MONTGOMERY There is one point that has not been referred to, that is, constitutional treatment I think it is the rule to give mercury in sympathetic trouble I am in the havit of enucleating the injured eye if it is blind, no matter what form the sympathetic inflammation has assumed I think that constitutional treatment is very important, and it is my practice to bring the patient under the influence of mercury as soon as possible in all cases of sympathetic ophthalmia, whether the injured eye has been enucleated or not

DR R TILLEY In 1883 the Ophthalmological Society of Great Britain referred to a committee the question of the general history of sympathetic ophthalmitis The committee appointed proposed a series of questions to the members of the Society The first of these questions was Given a case of sympathetic ophthalmitis, does the enucleation of the exciting eye modify the course? The committee took three years to consider the question, and after accumulating 200 cases among the published and unpublished cases that could be obtained among their fellow members and throughout literature, they decided that they were unable to formulate an answer to the question One conclusion that they came to was that the enucleation of the eye in the given condition did not seem to be detrimental to the general course of the sympathetic ophthalmitis It is true that Mauthner claims when sympathetic ophthalmitis is fully developed, at any rate certain forms of it, the eye should not be enucleated But I think the first case referred to, and the second case, which was similar, would really come under the class that Maunther would call irritation, and that, he would claim, should be unquestionably enucleated, because he distinctly says that in sympathetic irritation, especially where the sight of the exciting eye is gone, enucleation is absolutely demanded To determine just where sympathetic irritation leaves off and sympathetic inflammation begins is a difficult point The definition of sympathetic ophthalmitis given by the committee appointed by the Society of Great Britain was, turbidity of the vitreous or irido choroiditis plastica, keratitis punctata, iritis with adhesions, etc They distinctly say that they exclude simple sympathetic irritation, the reason being, as I understand it, because the opinion is fully established that with a condition of sympathetic irritation, especially where the sight is absent in the exciting eye, enucleation is the rule without any exception whatever I infer that Dr Hotz thinks that microorganisms are always present where sympathetic ophthalmia exists That

question seems still as unsettled as the question of enucleation in a case of sympathetic ophthalmia I think Alt recently reported a case where he searched most assiduously for the presence of microorganisms in the enucleated eye, but was unable to find any I think it very unlikely that sympathetic ophthalmia should always travel through the optic nerve

DR FRANK BILLINGS It is true, as Dr Hotz has stated, that the staphylococcus pyogenes aureus has been found in sympathetic inflammation of the eye, it is the organism that is almost always found wherever there is pus present So often is it found that, wherever we have an abscess, we can expect to get a culture of this organism The experiments of Deutchmann, as given by Dr Hotz, are on record in the reports of the Kaiserlichen Gesundheits Amt Other experiments were carried out after he made his statements, that is injections were made of the staphylococcus pyogenes aureus with the object in view of seeing if it would excite a sympathetic ophthalmia These experiments were made on rabbits, but not always with success, wherever suppurative inflammation resulted in the eye, then sometimes the sympathetic ophthalmia arose on the other, but not always, the subject is unsettled, and must remain so Mistakes have been ascribed to the experiments already made, that they were careless in making their cultures, that perhaps they did not get that particular culture from the inflamed eye The true culture of the staphylococcus pyogenes aureus would be of an orange color, and further, if the culture did grow within the eyeball, it would cause suppuration

DR HOTZ I did not say in my paper that I accepted Deutchmann's view that sympathetic ophthalmia is an infectious disease I have not made any experiments myself, and this question is so new and so difficult to settle that it would be premature to decide on the experiments so far made and to assert that sympathetic inflammation is always the result of the immigration of microorganisms I referred to these experiments of Deutchmann simply as an interesting illustration showing that in one way, at least, sympathetic inflammation can be produced, and that it always shows itself in the second eye in the optic nerve first These are questions which I did not propose to discuss in this paper

In reference to the statement made by one of the speakers that I did not give a clear definition of what I meant by sympathetic inflammation From his remarks I should infer that he would not consider as the beginning of sympathetic inflammation such a condition as I described in the first and second cases But I thought it was clear that if the optic nerve is not only hyperæmic, but its outlines indistinct and the papilla swollen, showing that there is more than an engorgement of the blood vessels, this condition of the nerve has passed the stage of irritation, that there is actually an active inflammation going on, we have an active neuritis and not simply an irritation I consider this is the first stage of sympathetic inflammation What I would call sympathetic irritation would refer to such disturbances in the second eye as sensitiveness to bright light or disability to use the eye on account of pain, in reading, a painful accommodation as I may call it, an impossibility of accommodating the eye in reading for any length of time, while the eye appears absolutely normal shows no evidence of inflammation, externally or internally Such a condition is sympathetic *irritation*, and as far as I know it never passes over into sympathetic *inflammation* It can go on for months and never disturb the eye in any other way, and you will see at once this is a very different condition from anything I referred to Sympathetic irritation can always be relieved by the removal of the exciting eye, no matter how long it has been going on But in sympathetic inflammation there is great danger in delay, it cannot be arrested when advanced very far, but it can be in the incipient stage That is what I tried to prove by my paper to night.

FOREIGN CORRESPONDENCE

LEIPZIG AND DRESDEN[1]

Thiersch—Spondylitis—Tubercle Bacilli and Suppuration—Osteo Myelitis—Ion Lesser—Stelzer—Fragments of Wood in the Bowels—Foreign Body in the Heart—Tubercular Osteo Myelitis—Vaginal Hysterectomy for Carcinoma—Leopold

Dear Dr Fenger —From Halle I went to Leipsig for the purpose of spending a few days in the surgical wards of Professor Thiersch I came in time to attend the opening lecture of the Spring term and soon became convinced that this famous surgeon had passed the zenith of fame and usefulness, and is rapidly approaching senile marasmus physically and mentally Thiersch has immortalized himself by his many ingenious plastic operations and his classical work on Epithelial Carcinoma, as well as by many other valuable contributions to surgical literature It is a great pity that such men, for the sake of science, grow old too soon, but such is life, short in its duration, and the greatest genius must submit to the inevitable consequences incident to old age During my former, as well as on this, visit to Europe I have been repeatedly reminded of the fact that when a man arrives at a certain age it would be better for himself, for his reputation, and more especially for the school he represents, to retire Langenbeck appreciated this fact and retired at the time when he was still in the possession of all of his faculties to make room for a man younger in years The sooner Theirsch follows his example the better for himself and the students There are many younger men in Germany who would bring more enthusiasm into the lecture room, and who are well prepared to become the successor of this eminent surgeon

In his introductory lecture he advised his students to take full notes on the cases presented in the clinic so as to preserve the material thus gained for future use and reference The subject of his clinic was spondylitis, and he presented a number of cases to illustrate the different stages of the disease He called attention to the fact that tubercular inflamma

[1] By permission of Drs Fenger and Senn

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LEIPZIG AND DRESDEN[1]

Thiersch—Spondylitis—Tubercle Bacilli and Suppuration—Osteo Myelitis—Ion Lesser—Stelzer—Fragments of Wood in the Bowels—Foreign Body in the Heart—Tubercular Osteo Myelitis—Vaginal Hysterectomy for Carcinoma—Leopold

Dear Dr Fenger —From Halle I went to Leipsig for the purpose of spending a few days in the surgical wards of Professor Thiersch I came in time to attend the opening lecture of the Spring term and soon became convinced that this famous surgeon had passed the zenith of fame and usefulness, and is rapidly approaching senile marasmus physically and mentally Thiersch has immortalized himself by his many ingenious plastic operations and his classical work on Epithelial Carcinoma, as well as by many other valuable contributions to surgical literature It is a great pity that such men, for the sake of science, grow old too soon, but such is life, short in its duration, and the greatest genius must submit to the inevitable consequences incident to old age During my former, as well as on this, visit to Europe I have been repeatedly reminded of the fact that when a man arrives at a certain age it would be better for himself, for his reputation, and more especially for the school he represents, to retire Langenbeck appreciated this fact and retired at the time when he was still in the possession of all of his faculties to make room for a man younger in years The sooner Theirsch follows his example the better for himself and the students There are many younger men in Germany who would bring more enthusiasm into the lecture room, and who are well prepared to become the successor of this eminent surgeon

In his introductory lecture he advised his students to take full notes on the cases presented in the clinic so as to preserve the material thus gained for future use and reference The subject of his clinic was spondylitis, and he presented a number of cases to illustrate the different stages of the disease He called attention to the fact that tubercular inflamma

[1] By permission of Drs Fenger and Senn

INTERNATIONAL CONGRESS

XV SECTION, ON PUBLIC AND INTERNATIONAL HYGIENE

Provisional Organization

Provisional Programme of Proceedings, Papers, and Discussions, prepared by Joseph Jones, M D, of New Orleans, Provisional President of Section, Public and International Hygiene

FIRST DAY, SEPTEMBER 5, 1887

1 Call to order by the President

2 Registration of the officers and members

3 Registration of the members of the Congress who may desire to read papers before the Section on Public and International Hygiene, and take part in its deliberations

4 Formal presentation by the President of the names of the officers and members of the Council of this Section, with the titles of the essays and papers to be read and discussed

5 Announcement of the titles of voluntary papers and essays to be presented to this Section for discussion

6 Reports of Vice Presidents Reports of Secretaries

7 Address by the President on "Public and International Hygiene"

SECOND DAY, SEPTEMBER 6

1 Reading of Minutes

2 Registration of officers and members

3 Announcement of order of business and reading of titles and papers

PAPERS AND DISCUSSIONS

1 Reading of paper by Richard H Day, of Baton Rouge, La, entitled "Report of an Inquiry into the Facts Relating to the Effects of Overflows of the Mississippi River and its Tributaries, and Rice Culture, upon the Public Health, and the Best Means of Controlling these Baleful Influences"

2 Discussion of the paper of Dr R H Day

3 Discussion of the Various Systems of Drainage and Sewage now employed in Europe and America

4 Reading of paper by Dr Leighton, entitled "The Place of Sanitary Science in Education, in which will be Briefly Sketched—

(*a*) The History of a Human Life, and note its Bearing on our Educational Deeds

(*b*) Recall the Character Impressed upon Education by the Various Civilizations of the Past, and in the Light of such Past Experience Discuss some of the Elements of Strength and Weakness in our American Civilization, and consequently in the Controlling Ideas which Dominate our Civilization

(*c*) Adhering as closely as possible to Ways and Means already Established, show how these various Educational Measures may be Utilized and Gradually Modified, so as Practically to Popularize Sanitary Notions, within their Personal and Public Aspects, with the least Radical Changes, and with due Recognition also of the Claims of other more and even less Important Training and Interests"

5 Discussion of the paper of Dr A W Leighton, embracing the subject of *Sanitary Education*

6 Paper by Dr W K Fort, of New Orleans, entitled "The Necessity of Public Hygiene to institute Efforts to suppress Syphilis, one of the Most Potent Agents of Destruction to Mankind"

7 Discussion of Dr Fort's paper

8 Discussion as to the Existence and Micro organism of Syphilis

9 Discussion of the measures best adapted to the Prevention and Modification and Arrest of Syphilis

10 Discussion of the Relation of Syphilis to Vaccination

11 Reading of volunteer papers and essays

12 Discussion of volunteer papers and essays

13 "The Application of Chemical Methods and Science to the Solution of Various Problems Relating to Public and International Hygiene," by Prof J W Thudichum, of London

14 Discussion of the paper of Dr Thudichum

15 Discussion of the Relations of Chemical Science to Public and International Hygiene

THIRD DAY, SEPTEMBER 7

1 Reading of Minutes

2 Registration of officers and members

3 Announcement of order of business and reading of titles and papers

PAPERS AND DISCUSSIONS

4 "The Cause and Prevention of Typhoid Fever, with Delineation of the Micro organisms of Typhoid Fever," by Dr Antoine Magnin, of France

5 Discussion of Professor Magnin's paper

6 Discussion of the Origin, Natural History, Relations to the Public Health, and Prevention, of Typhoid Fever

7 "Sobra un Bacillo Malarie, Natura della Malaria, sulla Preservazione dell' Uomo per paresi di Malaria," by Prof Tommasi Crudeli, Professor of Hygiene in the University of Rome, Italy

8 Discussion of the paper of Dr Tommasi Crudeli, and of the Facts and Theories Relating to the Cause, Nature, and Prevention of Malarial Fever

9 "Le Vaccin de la Fièvre Jaune, Resultats Statistiques des Inoculations Practiqués avec la Culture Attenuée du Microbe de la Fièvre Jaune" par le Dr Domingos Friere, of Rio de Janeiro, Brazil

10 Discussion as to the Nature of the Microbe of Yellow Fever, and the Nature and Value of Vaccination with Attenuated Cultures of the Yellow Fever Virus, as practiced by Professor Domingos Friere, of Brazil, for the modification and prevention of the disease

11 "L'étiologie et la Prophylaxie de la Fièvre Jaune," par Dr Manuel Carmona y Valle, of the University of the City of Mexico, Republic of Mexico

12 Discussion of the Method of Professor Carmona, for the Modification, Prevention and Arrest of Yellow Fever

13 "Outline of Investigations relating to the Causation and Prevention of Endemic and Epidemic Diseases, and more especially Malarial Fever, during a Period of Thirty Years, with a Claim for the

of age, and a multipara The disease had existed for some time, but appeared to be limited to the cervix Thorough antiseptic precautions were observed before and during the operation The patient was placed in exaggerated lithotomy position and the uterus rendered accessible with retractors Instead of forceps sharp double hooks were used for bringing the uterus down The vaginal roof close to the insertion of the uterus was incised with the scapel and the organ detached with blunt instruments and scissors Where hemorrhage was expected the incision was made between two ligatures The peritoneal cavity was first opened in front of the uterus but as it was found impossible to antevert the fundus sufficiently to bring it out through the wound the cul de sac of Douglas was opened, and the fundus brought out through this opening The round and broad ligaments were tied separately before they were divided After the uterus was removed the omentum came down into the vagina and after thorough disinfection it was reduced and the vaginal canal plugged with iodoform gauze Duration of operation about an hour and a half

I visited the gynecological and obstetrical wards in charge of Professor Leopold, and was promised a laparotomy for next day I was asked to come perfectly aseptic, which request I carried out conscientiously, including bath, shampooning, etc , but was informed next morning that inasmuch as the city was celebrating the King's birthday, the operation would be postponed As Dr Stelzer performed his vaginal hysterectomy an hour later it could not have been considered a crime in Dresden to perform a surgical operation on such an eventful day, and I made up my mind that a surgeon who postpones on such flimsy grounds cannot be troubled with many operations during the year, consequently I did not wait to test the reliability of the second promise, but lost no time in transporting the aseptic *ego* to a more profitable place N SENN

DOMESTIC CORRESPONDENCE

UNPROFESSIONAL CONDUCT OF RAILWAY SURGEONS

Dear Sir —While the poet has said,

> *The rank is but the guinea stamp,*
> *The man's the gowd for a' that,*

the world concedes the importance of the stamp Germane to your editorial on, "Medical Rank in the Navy," we desire to remark, "We have heathen nearer home" For a quarter of a century, by resolution and memorial, the American Medical Association has been endeavoring to dignify the profession, and to protect American seamen by providing surgeons for ocean steamers and by giving to the medical officers of the Navy a rank and pay proportionate with the acquirements and services demanded, and yet the Surgeon General reports, "It is impossible with the present inducements offered to find young men, possessing the necessary qualifications, who are disposed to become medical officers in the Navy"

Meanwhile there has grown up a system of land transportation that carries more passengers in one day than our marine service transports in a month, and liable to accidents and injuries that can hardly occur on the water Some of our great railroads, recognizing the danger to which its employes and passengers are constantly exposed have appointed men of distinguished professional ability as "chief surgeons," and in every considerable town along the lines of their roads the best resident practitioners as "local surgeons," paying them an honorarium commensurate with the services rendered and tendering the compliment of an employee's pass, thus assuring to the traveling public and to their employes the best possible surgical skill in case of accident

Other great roads, with the greed too often common to monster corporations, or with a deplorable ignorance of the importance to themselves and the public, have appointed as chief surgeons men whose respect for their profession permits them to send to doctors along the line of their roads this contract

> For and in consideration of a pass over the —— division of the —— & —— road I agree to render all the professional services required by such road and by the Hosp department of the road in —— county, state of ——
> WITNESS

While on these roads every other employe, from the president to the section boss, in addition to his salary, can get a pass for the asking, the surgeon, who, if he has any practice, rarely has occasion to ride, except in the service of the road, and whose services require the highest skill and are fraught with the gravest results, is placed beneath the lowest employe of the road and tendered for his services a pass What a regard for his profession must such a chief surgeon have, and what a soul!

Unlike applications for appointments in the Navy such roads do not require precedent examinations and "necessary qualifications," and hence have no lack of applicants

While some good men accept their appointment to maintain their professional standing among a people who without knowledge of the emptiness of the honor look upon it as evidence of merit, an overcrowded profession gives and abundance of supplicants who need opportunity for surgical practice

The chief surgeon of a rich corporation who would ask skilled and valuable services from his professional brethren for nothing, while he receives a salary far above his professional worth, should receive the condemnation of every honorable member of the profession, and the chief surgeon of a great railroad who would appoint cheap doctors, because they are cheap, to a position that might place under their care any man in the nation from its chief Executive down merits the execration of the whole people

If the American Medical Association feels that the honor of the profession and the protection of the people is involved in appointing competent surgeons to our ocean steamesrs and in securing suitable rank and pay to the medical officers of the Navy, has it not a parallel interest in the qualification and position of the local surgeons of the great railroads of the country? W

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3 Announcement of order of business and reading of titles and papers

PAPERS AND DISCUSSIONS

1 Reading of paper by Richard H Day, of Baton Rouge, La, entitled "Report of an Inquiry into the Facts Relating to the Effects of Overflows of the Mississippi River and its Tributaries, and Rice Culture, upon the Public Health, and the Best Means of Controlling these Baleful Influences"

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7 Discussion of Dr Fort's paper

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14 Discussion of the paper of Dr Thudichum

15 Discussion of the Relations of Chemical Science to Public and International Hygiene

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3 Announcement of order of business and reading of titles and papers

PAPERS AND DISCUSSIONS

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5 Discussion of Professor Magnin's paper

6 Discussion of the Origin, Natural History, Relations to the Public Health, and Prevention, of Typhoid Fever

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13 "Outline of Investigations relating to the Causation and Prevention of Endemic and Epidemic Diseases, and more especially Malarial Fever, during a Period of Thirty Years, with a Claim for the

Comprehensive Demonstration of the Chemical, Microscopical, and Pathological Characters of the Blood and Organs in Malarial Fever, and the Application of the results of these Investigations to the Diagnosis of Diseases, and to Medico-legal Science," by Joseph Jones, M D, of New Orleans, La

14 "The Influence of Climate in the Production of Cholera Infantum," by George Troupe Maxwell, of Ocala, Florida

15 Discussion of paper by Dr Maxwell

16 Discussion of the causes of Diarrhœa and Dysentery, of the measures of Public Hygiene, best adapted to their prevension

17 Discussion as to the present state of our knowledge with reference to the mode of origin and spread of Asiatic Cholera

18 Discussion of the nature and value of the Methods of Disinfection and of Sanitation employed for the arrest of Asiatic Cholera

19 Discussion of the mode of performance, and the value of vaccination with the attenuated virus of Asiatic Cholera, for the Modification and Arrest of Asiatic Cholera

20 Relations of Asiatic Cholera in its Origin and Propagation to climate, soil and sanitary conditions

21 "Public Hygiene," by Dr Benjamin Ward Richardson, of London

22 Discussion of paper by Dr Richardson

23 Discussion of the hygiene of Public Institutions, buildings, hospitals, barracks, prisons, penitentiaries and jails

24 Discussion of the question of the establishment of uniform hygienic rules for the conduct of civil and military prisons, and for the humane treatment of military prisoners, in accordance with hygenic laws, and for the prompt and uniform exchange of prisoners of war

FOURTH DAY, SEPTEMBER 8

1 Reading of minutes

2 Registration of officers and members

3 Announcement of order of business and reading of titles and papers

PAPERS AND DISCUSSIONS

4 "Discussion of the Causes of Typhus Fever in the Prisons and Hospitals during the American Civil War, 1861–1865," by D W Hand, of St Paul, Minnesota

5 Discussion of the facts illustrating the origin and mode of propagation of Hospital Gangrene, Erysipelas and Pyæmia in military hospitals and prisons

6 "Military Hygiene," by M K Taylor, M D, Major and Surgeon, U S A, San Antonio, Texas

7 Discussion of paper by Dr Taylor

8 Discussion of subjects relationg to Military and Naval Hygiene

9 Demonstrations of portable apparatus for water analysis

10 Reports of Committees

11 Reading of Volunteer papers

12 "Relations of Race to the Origin and Propagation of various Diseases," by Professor E D Mapother, M D, of Dublin, Ireland

13 Discussion of the paper of Professor Mapother and of the following subjects

(*a*) The relative Mortality of the different Races of Mankind as influenced by Physical Constitution, Germinal Forces, Climate, Soil, Food, Occupation, Domestic Habits and Sanitary Conditions

(*b*) Relative rates of Increase and of Mortality amongst the white and colored Races in Africa, in the West Indies, in Brazil, in Mexico, and in the United States of America

14 "The History and Practical Application of Steam as a Disinfectant—

(*a*) The degree of Temperature and Time required

(*b*) Mode of Application

(*c*) Practical Results" By Vice-President A N Bell, of New York City, N Y

15 Discussion of the paper of Dr Bell

16 Discussion of the relative value of Dry Heat, Dry Air, Moist Air, Steam, and superheated Steam, in the disinfection of infected Ships, Houses, and articles of Furniture and Clothing

17 Description and demonstration of the various forms of Apparatus adapted to the application of Heat to the disinfection of infected Ships, Houses, and articles of Furniture, Beds, Bedding, Clothing, etc

18 Discussion of the relative value of the more important Disinfectants and Germicides, as Bichloride of Mercury, Carbolic Acid, Sulphate of Iron, Sulphate of Copper, Red Oxide (binoxide) of Mercury, Sulphurous Anhydride (sulphurous acid), and Chlorine, Iodine and Bromine

19 Discussion of the relative value of the various methods of Disinfection, Detention, and Isolation, employed at the National and State Quarantine Stations of Portugal, Spain, Italy, France, Austria, Germany, Turkey, Russia, England, United States of America, Republic of Mexico, Central, South, and Insular America

20 Discussion of the facts showing the necessity on the part of all civilized Nations of formulating and adopting uniform Rules and Regulations governing Quarantine, modified and adapted to the Climate, and to the Endemic and Epidemic Diseases of different Countries

FIFTH DAY, SEPTEMBER 9

1 Reading of minutes

2 Registration of members

3 Reports of Secretaries

4 Reports of committees

5 Announcement of titles of papers and order of business

PAPERS AND DISCUSSIONS

6 "A new method of testing the Germicidal and Antiseptic Powers of certain Mineral and Vegetable Substances, employed externally and internally, in the treatment of Wounds, Tumors, Enlarged Glands, Ulcers, and Syphilis, and in certain Sanitary Operations of Domestic and Public Hygiene," by Joseph Jones, M D, of New Orleans, La

17 Discussion of the paper of Dr Joseph Jones

18 Discussion of previous question relating to the

methods employed by Chemists, Physiologists, and Microscopists, to determine the nature and mode of propagation of the Causes of Infectious and Contagious Diseases

9 "Subjects relating to Public Hygiene," by W C Cook, M D, of Nashville, Tenn

10 Discussion of the paper of Dr Cook

11 "On the Relations of State Medicine to Medical Jurisprudence," by W L Schenck, M D, of Osage City, Kansas

12 Discussion of the paper of Dr Schenck

13 "Sanitary Inspection of Railroads, and the Sanitation of Railroads, Cars and Stations," by R Harvey Reed, M D, of Mansfield, Ohio

The report of Dr R Harvey Reed "On the Sanitary Inspection of Passenger Coaches," will embrace the results of careful experimental investigation In the language of its author This report will be based upon the results of repeated personal examinations of the passenger coaches of a number of the leading American railroads, while in actual service, and will embrace the following

1 The Temperature
of the atmosphere outside of the coaches,
of the air inside the coaches while running,
of the air inside the coaches while standing
2 The Heating of the Coaches
(*a*) by stoves
(*b*) by hot air
(*c*) by hot water
3 The Ventilation of Coaches
(*a*) direction of wind outside of coaches
(*b*) currents of air through the coaches
(*c*) supply of fresh air
(*d*) exit of foul air
4 Lighting of Coaches
(*a*) by candles,
(*b*) by lamps,
(*c*) by gas
5 The chemical analysis of the Air in the Coaches
6 The chemical analysis of the Drinking water used in the Coaches
7 The use of Disinfectants
8 The supply of Tools, Water buckets, etc,
9 General Sanitary Condition
of the toilets,
of the hoppers,
of the urinals,
of the water closets
10 Conclusions and Suggestions

14 Discussion of the paper of Dr R Harvey Reed, Vice President

15 Discussion of the Sanitary Cordons of Railroads, and of International and Inter State Communication and Commerce, during the prevalence of Contagious and Infectious Diseases, such as Yellow Fever, Small Pox, Asiatic Cholera, and Oriental Plague

16 "Cremation," by Dr Felix Formento, of New Orleans La

17 Discussion of Dr Formento's paper

18 Discussion of the relative value, in a hygienic point of view, of the various modes of the Disposal of the Dead now prevalent in Civilized Nations

19 Discussion of the modes, and various Structures employed in the Cremation of the Dead

20 "A Practical and Common sense View of Public and International Hygiene, the Importance of the Work, What is Practicable? The Necessity of Harmony and Uniformity of Action among the States of this Republic in order to make effective the Work of the International Medical Congress to prevent Disease and contagious Epidemics," by Urial R Milner, M D, of New Orleans, La

21 Discussion of paper of Dr Milner

22 Reading of volunteer papers

23 Reports of committees

[NOTES—1 The preceding "Provisional Programme" of the papers and subjects for discussion during the sessions of the Section on Public and International Hygiene, is evidently subject to indefinite expansion It will be observed that under the head of Volunteer Papers and Essays, any registered member of the Ninth International Medical Congress will have an opportunity of being heard on any subject relating to Public or International Hygiene

2 The subjects proposed for discussion embrace a large amount of practical knowledge of vast importance to this Republic and to all civilized nations

3 The meetings of the Section on Public and International Hygiene of the Ninth International Medical Congress, to be held in Washington, D C, September 5, 1887, as indicated by the preceding "Provisional Programme," should be devoted exclusively to the reading and discussion of scientific papers and essays relating to the science and art of Public and International Hygiene

4 All officers and members of the Council, and all individuals not included in these classes, who may desire to take part in the proceedings, *must first register as members* of the Ninth International Medical Congress

5 The daily registration of officers and members relates to those sitting for the first time in this Section, and is designed to prevent unnecessary confusion in the proceedings

6 This "*Provisional Programme of Proceedings of the Section on Public and International Hygiene*, is submitted as a contribution (the result of much labor and extensive correspondence), to aid those members of the medical profession who may desire to present papers or to engage in the discussions, with a full and respectful recognition of the powers of the Ninth International Medical Congress, which can and will, upon its formal assemblage in Washington, D C, *confirm or reject* all (or each and every) "Provisional Officers," "Sections," and "*Provisional Programmes*" of scientific work

JOSEPH JONES, M D,

156 Washington Avenue, Fourth District, New Orleans, La, July 21, 1887]

REDUCED RAILWAY RATES

The roads included in the "Western States Passenger Association" have offered the same reduction as already announced for other associations, that is one full fare going and one third fare returning on the certificate plan The following roads and associations require that their certificates shall be distributed by the undersigned to whom application should be made for them

Southern Passenger Association

Chicago & Alton Railroad Company
Illinois Central Railroad Company
Trunk Line Association, (the last named after Aug 20th)

As far as heard from the certificates are distributed, on all other roads, only by the agents of the roads and can be had on purchasing the tickets at the stations

It is important for members to bear in mind the following rules

1 Some of the roads will not sell return tickets earlier than three days prior to the meeting of the Congress

2 Members must secure receipts from the ticket agents at starting points for full fare to Washington or, as far as the company has jurisdiction, upon the certificate of the company

3 The going and return must be over the same route

Extract from rules of some of the "Western States Association," "Members passing over *two* or more railways en route to your meeting or who pay two or more short fares locally, on account of local tickets not being sold through, should procure receipts for the fare paid going over each line, or for each ticket purchased, as return tickets at the reduced rate will only be issued locally by each company and for same trips Blank forms for this purpose are in the hands of all station agents and will be issued as receipts for full fare paid on application

J W H LOVEJOY, M D,
Ch Com on Transportation
No 900 12th St, Washington, D C
Attest —C H A KLEINSCHMIDT, M D,
Secretary Com of Arrangements

The Northern Pacific R R Co and the St Paul, M & M R R will return members to any points on their lines for *one fifth* fare, full fare being paid on coming East to St Paul The certificates of these Roads are distributed by the Railroad Agents

The Union Pacific declines to make special rates The New England General Ticket and Passenger Association also declines

J W H LOVEJOY, M D,
Chairman Trans Com

EXCURSION RATES TO CALIFORNIA,—CORRECTION —Concerning the excursion rate for members of the Medical Congress and families from Niagara Falls to California, a mistake was made in announcement last week It will be about $95, and the sleeping car fare will be about $17 From Washington, via New Orleans, it will be about $100 This is round trip, and permits the excursionists to stop over a day at Salt Lake going and returning, via New Orleans and through Kentucky, visiting Mammoth Cave, etc Tickets good for six months

H M VANARMAN, T P A S P Co

EXHIBITS AT THE CONGRESS —All applications for space for Exhibits before the International Medical Congress should be addressed to Dr D C Patterson, Treasurer of the Committee of Arrangements and Chairman of Sub committee on Hall and place of meeting of Congress

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MISCELLANEOUS

DR JOSEPH C HUTCHINSON, long known as the most eminent surgeon of Brooklyn, died in that city on July 17, aged 60 years

FOUL DRINKING WATER ON BOARD SHIP —Dr Harold C Ernst, the bacteriologist of Harvard University, to whom was submitted for analysis a vial of the water drunk by the passengers of the Allan Line steamship Prussian, which arrived at Boston from Glasgow a few weeks ago, made his report to the Board of Health He found evidences of dangerous impurities in the water, and that it was totally unfit to be drunk Sixty five of the Prussian's passengers were ill with typhoid fever when the vessel reached port

THE HEATING OF CARS—RAILWAY BRIDGES —Last month Gov Hill, of New York, signed a bill regulating the heating of steam cars The statute makes it unlawful for any steam railroad after May 1, 1888, to heat its passenger cars on any other than mixed trains by any stove or furnace kept inside the car or suspended therefrom, except it may be lawful in case of accident or other emergency to temporarily to use any such stove or furnace with necessary fuel Provided that in cars which have been equipped with apparatus to heat by steam, hot water, or hot air from the locomotive or from a special car the present stove may be retained to be used only when the car is standing still, and provided also that this act shall not apply to railroads less than fifty miles in length, nor to the use of stoves, of a pattern and kind to be approved by the Railroad Commissioners, for cooking purposes in dining room cars The law also provides that from Nov 1, 1887, floor systems shall be maintained on all bridges so constructed as to support a derailed locomotive or cars, with guard rails or timbers so constructed as to guide the wheels in case of derailment Guard rails shall be maintained upon the approaches to all bridges

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OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM JULY 30 1887, TO AUGUST 5 1887

Col Chas Sutherland, Surgeon, leave of absence extended one month S O 174, A G O, July 29, 1887

Major B Fryer, Surgeon, relieved from further duty at Ft Lowell, Ariz S O 176, A G O, August 1, 1887

Major Lly McClellan, Surgeon, detailed as member of a board of survey, to meet at the Medical Purveying Depot, St Louis, Mo on August 1, 1887 S O 173, A G O, July 28, 1887

Major Harvey E Brown, Surgeon, relieved from duty in Dept Mo, and ordered to Jackson Bks, La, for duty at that post S O 174, A G O, July 29, 1887

Capt Jno de B W Gardiner, Asst Surgeon, granted leave of absence for one year, on surgeon's certificate of disability S O 177, A G O, August 2, 1887

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDING AUGUST 6 1887

P A Surgeon Fairfax Irwin, to inspect unserviceable property at New York Marine Hospital, August 5, 1887

P A Surgeon H R Carter, granted leave of absence for six days August 1 1887

P A Surgeon A D Bevan, granted leave of absence for ten days August 6, 1887

Asst Surgeon Seaton Norman, granted leave of absence for four days on account of sickness August 5, 1887

CORRIGENDA

In THE JOURNAL of August 6, Dr Senn's letter, read *Geu mer* for Geugmer On page 188, 16th line from bottom, read *mer* for mt, and 15th line from bottom read *richtige* for rechtige

In THE JOURNAL of August 6, p 177, table of cases of abdominal section, case 22, column 5, for "fibroid tumor of uterus, 26 *lbs*", read 6 *lbs*

THE

Journal of the American Medical Association.

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ORIGINAL ARTICLES

REPORT OF TWELVE CASES OF ALEXANDER'S OPERATION

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Since October, 1886, I have performed the operation of shortening the round ligaments, known as Alexander's operation, twelve times My object in presenting a report of the cases operated upon is three fold 1 To elicit a discussion of the subject, 2 To record, as a part of the history of the operation, a number of successful cases, and, 3 To add a few original observations, and to call attention to what has in my experience seemed to be an improvement in the mode of operating

This operation has been brought forward as a desirable substitute for many of the operations and appliances which have so long been used in the treatment of procidentia and retro displacements Uterine prolapse in its various degrees, and backward displacement of the uterus are among the most common, and certainly not the most curable, of the ailments with which the gynecologist is called upon to deal It is true that relief may be afforded in most cases by means of a properly adjusted pessary, but it is also true that in all but a small proportion of cases in which relief is secured in this manner the pessary becomes a life long necessity, which is often attended by very great inconvenience, and is not infrequently productive of serious injury In many cases, a woman who is dependent upon a pessary to retain the uterus in proper position, is almost equally dependent upon a physician to inspect the appliance at stated intervals, or whenever discomfort is experienced In by far the great majority of cases also, it is found necessary to substitute for the old appliance one of larger size or different form, as each successive ring or lever or other device loses its efficiency by the stretching of the vaginal walls The statistics of the results of the mechanical treatment of these affections are such as to justify the statement that by this method there is little or no hope of radical cure, even after years of treatment In two series of cases of retroversion treated by eminent gynecologists, numbering 643 persons in all, only eight were reported cured by means of vaginal pessaries, and of prolapsus uteri, Thomas says frankly "The prognosis as to cure is very bad, and even as to complete relief is not good"

The unsatisfactory character of the results which have been attained in the treatment of this class of uterine affections by pessaries, is well attested by the many surgical procedures which have been suggested for their relief The numerous forms of elytrorrhaphy and colporrhaphy, to the list of which almost every leading gynecologist has contributed some modification, have successively promised wonderful results, but with the exception of the median colporrhaphy of LeFort, have all proven ineffective except in the most favorable cases As regards the results of the surgical methods which have been in vogue before the introduction of the method of Alexander, Dr T Gaillard Thomas says, "It is never safe to promise a good and permanent result from any of the operations of elytrorrhaphy"

When the claims of Dr Alexander for his operation of shortening the round ligaments were first brought forward, I felt exceedingly skeptical regarding the value of the procedure, but after making some careful dissections of the parts involved in the operation, I became convinced that my skepticism was largely the result of ignorance respecting the nature of the round ligaments and their functions The experiments of Savage and others have shown that when the uterus is in a normal position, the round ligaments are relaxed and contribute nothing to its support The curved and somewhat tortuous course which they pursue from the cornua of the uterus between the folds of the broad ligament and around the bladder to the inguinal canals, gives them a slack of about two inches The conclusion from this fact that they perform no important office in the maintainance of the uterus in its normal position, is, however, erroneous The round ligaments are the only structures which are so related to the uterus as to make tension upon it from above The action of the lateral ligaments seem to be largely that of guys, by which the organ is so balanced that it may be kept in its proper place by the pressure of the contiguous organs, the bladder in front and the bowels behind Very little force is required to sink the uterus in the pelvis to the extent of two inches When a woman is coughing violently, straining at stool, or lifting heavy weights, the uterus is doubtless forced downwards in the pelvic cavity, and thus the round ligaments are brought into efficient action It

seems to me very clear that the chief function of the round ligaments is to prevent excessive downward displacement of the uterus from such causes as are very frequently, though temporarily, in action

The general lack of confidence in this operation has seemed to be based upon a belief that the round ligaments are not sufficiently strong to resist the strain to which they are subjected An experiment which I made for the purpose of testing the strength of the ligaments, may be of interest in this connection Having removed the outer four inches of two ligaments, I secured the two ends of one to silk ligatures While the ligament was suspended by one ligature, a weight was attached to the other, which was gradually increased to eight pounds and ten ounces, when the ligament broke, or rather was cut off by the ligature The stretching of the ligament during the experiment did not amount to more than one fourth inch When it is remembered that the portion of the ligament removed is its smallest and weakest part, and that the weight of the uterus is at most only a few ounces, it will at once appear that the relative and the absolute strength of these structures has been very greatly underrated A further consideration of much importance is that the ligaments are not expected to maintain perpetually the strain to which they are at first subjected In one of the accompanying cuts, (Fig 1), I have attempted to show the normal position of the uterus and its relations to the round ligaments and contiguous organs

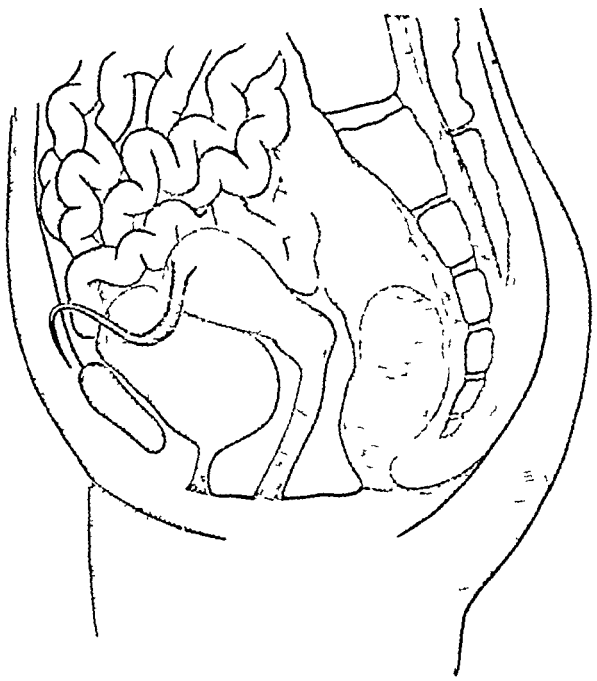

FIGURE 1

As will be seen by reference to the cut, the uterus, when in its normal position, lies forward, out of the line of downward action, and its wedge shaped body is buoyed up by the bladder in front and the inflated intestines behind When the uterus falls backward, it lies across the pelvis in such a way that it is directly in the line of downward action (Fig 2), the intestines enter the anterior cul de-sac, and the weight of the abdominal viscera is brought to bear in such a manner as continually to force the organ lower down In efforts to relieve the bowels, the contents of the colon impinge upon the upper side of the uterus in such a manner that the whole force of the effort to relieve the bowels is felt by the round ligaments, which are made taut and kept under continual strain When the ligaments are shortened by the performance of Alexander's operation, the uterus is rescued from its abnormal position and is brought back to the position shown in Fig 1 The intestines are made to retreat from the anterior cul de sac and assume their normal position behind the uterus When this has been accomplished, the normal forces

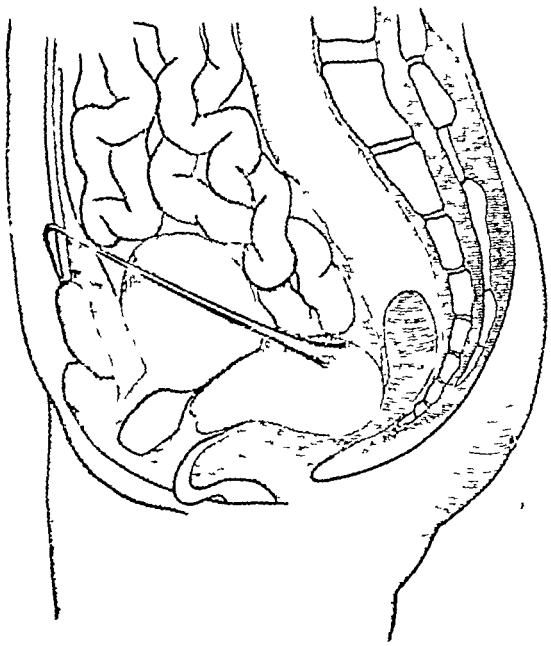

FIGURE 2

which sustain the organ come into play, and it is only expected of the round ligaments that, as Dr Alexander expressed it, they shall act as mooring ropes to hold the uterus forward, so that really only a very small amount of strain is brought upon them Their ability to do this has been amply demonstrated not only by the experiments referred to, in which I showed their tensile strength to be very great, but in the numerous cases of this operation in which they have satisfactorily performed the service expected of them Both analogy and the results of pathological investigation show that in some cases, at least, retrodisplacements and procidentia are due not solely to a stretching of the supporting ligaments, but to an hypertrophy or hyperplasia of these structures I have found positive proof of this fact in several cases of extreme retroversion of several years standing Instead of finding the round ligaments attenuated, as I expected, I found them extraordinarily large In two instances the ligaments were fully 18 mm in diameter By means of this operation, a process of involution is set up, and it is only required that the round ligaments shall hold the womb forward out of the "abdominal current," while this process is taking place, and the surrounding organs are readjusting

themselves in normal relations to the uterus Changes of this sort are sometimes secured by a suitably adjusted pessary, but by shortening the round ligaments, this end is much more efficiently and certainly attained

As regards the indications for the operation, I believe that it may be usefully and properly performed in the following classes of cases

1 Cases of procidentia in which the causes are chiefly such as operate from above, and in which the patient is not relieved by the operation of perineorrhaphy, when this operation is required I am not sure that the operation is applicable to women who are many years past the menopause, but in cases of this sort I have obtained very satisfactory results by means of the median colporrhaphy of LeFort

2 Cases of retroversion or retroflexion which are not cured by the employment of less heroic means

3 Cases of anteflexion combined with retroversion and prolapsus of the ovaries I see no reason why the operation should not be also employed for the relief of prolapsus of the ovaries alone I have now in hand a case of this sort which has resisted for years all other means of treatment, and upon which I intend to make a trial of the operation

4 Cases of anteversion where the fundus lies behind the pubis I believe the view of Thomas and some other gynecologists, that anteversion may be due to shortening of the round ligaments, is incorrect Indeed, I think I have proved this to be the case by relieving a case of extreme anteversion by the performance of Alexander's operation I have attempted to show in Fig 3 the relation of the

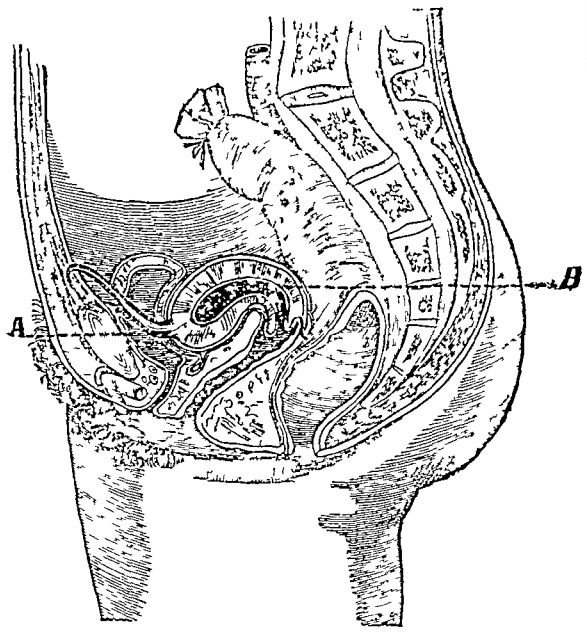

FIGURE 3

round ligament to the uterus in anteversion By a glance at the cut it is easy to see that anteversion cannot possibly occur as the result of shortening of the round ligaments I will remark further upon this point in reporting the case referred to

I do not wish to be understood as advocating that all cases of displacement, either prolapsus, retroversion, or inteversion, should be subjected to Alexander's operation I have long been convinced that many cases of displacement require no treatment at all, certainly no surgical operation The treatment of a displacement which gives rise to no symptoms, either local or remote, may, in my estimation, be properly termed meddlesome gynecology In many cases in which treatment is required, a cure may be effected by simple means, especially by the removal of such causes as improper dress, a chronic habit of constipation, or weakness of the abdominal muscles In all cases, whether this operation is resorted to or not, such means should be employed as will strengthen the abdominal muscles, restore the natural supports which may have been weakened, and build up the general health

The following is a report of all cases on which I have performed this operation up to date

Case 1 Mrs R , aged 24, suffering with complete procidentia The cervix uteri protruded fully two inches, and was lacerated to the os internum on both sides The patient suffered with very profuse menstruation, and was in a very feeble condition The same patient had been under my care in 1884, at which time I found the same conditions which had then existed for four years, the procidentia having begun before marriage At that time I performed trachelorrhaphy and anterior and posterior colporrhaphy, by which she was temporarily relieved In 1885 she again became pregnant, and at childbirth the cervix was again lacerated The procidentia returned as bad as ever, and existed for more than a year before I again saw the patient All sorts of pessaries had been tried without relief

I thought this case a suitable one for the trial of Alexander's operation, and after making some preliminary dissections on the cadaver, I operated, Oct 29, 1886, having repaired the laceration of the cervix a few weeks previous The ligaments were found to be very small, but both were found and drawn out four inches The ligaments were secured by deep silver sutures and superficial silk sutures A few small vessels were tied with cat gut Drainage tubes were placed at the lower end of the wound, and the uterus supported in position by dry cotton pledgets well dusted with powdered boracic acid The cotton support was changed every day, and a hot vaginal douche administered Drainage tube was removed on third day The right side healed readily, the left side more slowly Patient was discharged, and returned to her home Dec 31, 1886, in excellent health, with none of the former symptoms Uterus was held perfectly in position, without pessary of any sort Patient able to be on her feet all day without difficulty I heard from this patient several months later She was then engaged in business which required her to be upon her feet constantly Was wearing no pessary, and was pronounced by her family physician to be in perfect health At last accounts she was still well, with none of the old symptoms

Case 2 Miss L B , aged 25 At eighteen had a

severe fall from a carriage At next menstrual period had an epileptic convulsion Subject to frequent attacks of epilepsy ever since, and had suffered constant headache and backache Had been under the care of several physicians, who had employed pessaries and treatment of various sorts for the relief of retroversion On making examination, found retroversion and flexion, the fundus very low and nearly double normal size, ovaries enlarged and prolapsed Patient's general health was wretched Was emaciated, extremely nervous, depressed, and had tender spine, moist palms, and constant headache Was unable to wear any kind of pessary on account of pain caused by pressure on the ovaries, but when a properly adjusted pessary could be tolerated, had always found relief from the epilepsy, so long as the uterus was held in position For some years this had been accomplished by means of a pessary with an external support, but as this had become intolerable, it had to be abandoned Patient had used bromides freely for the relief of epilepsy, as the result of which there was decided hebetude, and very bad digestion The patient was altogether wretched

Operation March 3, 1887 Both cords were found well developed Shortened three and one-half inches Secured the ends with deep sutures, wire upon one side, cat-gut upon the other Placed drainage tube and applied iodoform dressing Placed stem pessary to hold the uterus in position Had to remove the pessary on third day on account of pain and epileptic convulsions which seemed to be induced by it Pain and convulsions ceased immediately upon its removal Wounds healed by first intention Highest temperature reached at any time, 100° F Patient discharged, April 18, relieved of backache and other nervous symptoms Was gaining rapidly in flesh The fundus uteri was held in good position, but the cervix was still flexed on account of the enforced premature removal of the stem pessary Recent reports showed great improvement in all particulars Great gain in flesh and strength No epilepsy

Case 3 Miss C B, aged 25 This patient came first under my care at the Sanitarium in October, 1885 At that time was so feeble that she had been bed-ridden most of the time for three years, and was unable to engage in any kind of labor Uterus was retroverted and prolapsed to the third degree Both ovaries were also prolapsed, enlarged, and tender Among other leading symptoms, were a highly sensitive spine, great nervous irritability, mental depression, palpitation of the heart, deranged digestion, extremely profuse and painful menstruation, usually lasting six days This patient had been under constant medical treatment for years Had consulted eminent and skillful physicians who had exhausted their skill in efforts to find some form of pessary which would afford relief, but without securing more than temporary benefit After six months treatment, which consisted chiefly of measures calculated to build up her general health and increase the tone of the muscular system, she returned home very greatly improved, but gradually drifted back into her old condition and returned, March 4, to see if anything could be done for her

Operation March 23 Both ligaments were found and shortened about four inches, and were secured in the wound in the usual manner Highest temperature registered was 100 2° F Wounds did not unite by first intention, which was due to sloughing of the outer ends of the ligaments, which were tucked in the wound instead of being cut off Patient left the surgical ward 24 days after the operation, being able to go to her meals in the general dining room in a wheel chair Up to the date of the present writing, the womb has remained in a slightly anteflexed position The ovaries, which were formerly very low, can not be discovered by digital examination The following is the patient's own description of her own condition before the operation and since

"I had suffered constantly for six years with severe pain in my head, back and pelvis Could not stand erect during these years on account of extreme soreness in the pelvis and abdomen During menstruation I was compelled to keep my bed for five or six days and in great agony Complete nervous prostration Could not be on my feet five minutes at any time without great discomfort My spine was so tender I could not bear the touch of clothing Almost continual palpitation of the heart Now, after having Alexander's operation performed, I am able to sit, ride, or walk, with ease The pain and soreness has disappeared from my spine as well as from the pelvis and abdomen My head is clear My heart is all right Instead of menstruating six days, the menstruation lasts but two days, with almost no pain, and I am able to be about during the time, which was utterly impossible before And last, but not least, my shattered nerves are fast recovering"

Case 4 Mrs M, aged 30 Retroversion and slight flexion, uterus lying very low in the hollow of the sacrum Patient complains of constant pain in the right thigh and through the right side of the body Both ovaries tender and prolapsed Vaginal and cervical catarrh Hypertrophy of cervix with induration Menstrual flow profuse, attended by much pain The patient's general health had suffered much She was very neurasthenic Complained much of inability to sleep Had been under excellent medical care for many years, but had steadily declined in health Had borne one child, since which time her troubles had been aggravated, but believed the retroversion was present before marriage, dating back ten years

Operation March 29 Uterus drawn forward as much as possible Ligaments shortened about four inches, and secured in the wound by cat gut sutures, the outer ends of the ligaments being tucked into the wound Highest temperature, 100 2° F, which was only reached a few times, and was due to the sloughing of the outer ends of the ligaments, by which union by first intention was prevented Wounds were somewhat slow in healing, but gave the patient little discomfort Menstruation occurred the second week following the operation The patient expressed herself as very comfortable No pain or inconvenience excepting retention of the urine, necessitating the use of the catheter a few times This I attributed to the pressure of the sup-

port by which the uterus was held in place rather than to the pressure of the womb, as relief was obtained when the cotton pledgets were removed The patient said she had not had so easy a time in many years Patient discharged from the ward April 27 Allowed to walk about the house Went home six weeks later relieved of all her old difficulties, and with the uterus in perfectly normal position Ovaries out of reach The patient was able to take vigorous exercise in the gymnasium and long walks without any inconvenience whatever Stronger than ever before in her life, sleeping well and in excellent spirits, wearing no pessary I was more than usually pleased with the results of this case, as the patient had been warned against the operation by her family physician, who, after a consultation with a professor of gynecology in a neighboring State, informed her that the operation was "difficult and dangerous," and not likely to secure any good results, but the failure of all other means to secure to her relief from her many sufferings, induced her to submit to the operation, and she was well satisfied with the results

Case 5 Mrs D, aged 28 *In good health until* birth of first child, nine years previous, when she "got up too soon" Constant, distressing pains in the ovaries, extending to the limbs Severe dysmenorrhœa Pain and tenderness the whole length of the spine Constant occipital headache Patient extremely nervous Confined to bed much of the time Found uterus retroverted and flexed Ovaries tender and prolapsed

Operation April 13 Ligaments shortened four inches, and secured by deep and superficial cat gut sutures The outer ends of the ligaments were tucked into the wound The second day following the operation the patient suffered considerably from swelling of the uterus about the wound and over the pubes, which extended into the labia of the right side Pain and swelling relieved by poulticing The patient had been accustomed to the administration of large doses of morphia whenever suffering pain, and received several doses of ⅛ to ¼ gr of morphia administered hypodermically The outer portion of the ligaments sloughed, and the wound healed slowly by granulation Highest temperature 102 3° F Patient went home on June 3 on her feet, and gaining rapidly in strength and flesh Uterus and ovaries were in normal position, menstrual period much less painful than formerly

Case 6 Mrs V, aged 30, suffered many years with backache and pelvic pains Severe pain at menstrual periods General and nervous debility, mental depression, dyspareunia, and disordered digestion

Operation, April 3 Ligament on right side was found well developed, but was firmly adherent to the internal ring, so that it could not be drawn forward Suspecting that this might be due to some anatomical peculiarity, I closed the wound in the usual way, and did not operate upon the left side Wound healed by first intention Highest temperature 100° F I have since regretted that I did not operate upon the left side, as in subsequent cases I have found a great variation in the condition of the ligaments of the two sides

Case 7 Mrs W, aged 42 The patient complained of constant pelvic pain, chiefly in the left side Greatest at night Much increased during menstrual period Also pain in the lumbar region, and continual bearing down pain Patient very feeble Unable to walk any distance or to perform household duties Very great nervous prostration and general weakness Physical examination showed extensive abrasion of the cervix with considerable hypertrophy and induration of the entire uterus The last physician who had examined the patient had pronounced the disease of the cervix to be malignant Great tenderness and throbbing all about the uterus

After a few weeks' preparatory treatment, Alexander's operation was performed on April 21 Both ligaments were found and shortened about four inches Ends of ligaments secured by cat gut sutures Wounds dressed in the usual manner Considerable swelling of the wounds which only partially healed by first intention Highest temperature 101 1° F, which was due to a small abscess which formed at the upper angle of the wound on the right side Patient left the ward May 17 Was allowed to walk May 26, with the uterus and ovaries in normal position No pelvic pain or tenderness No throbbing Uterus normal size No local symptom of any sort except slight vaginal catarrh Patient was instructed to continue the employment of the hot douche, massage, and general faradization under the care of a good nurse, and reports continued and very satisfactory improvement

Case 8 Miss L, aged 29 Had been out of health for five years For three years very miserable, and under constant medical care Severe and constant lumbar pains, occipital headache, and a great variety

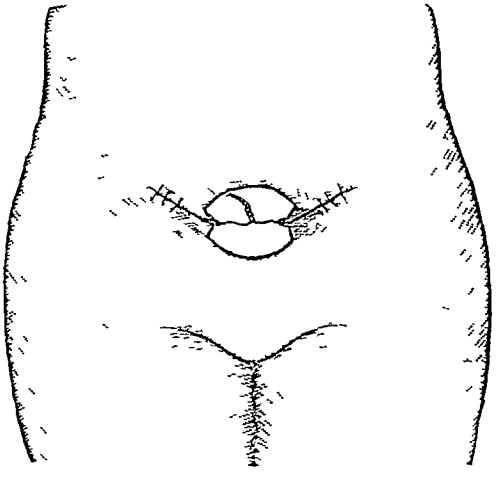

FIGURE 4

of neurasthenic symptoms Painful and profuse menstruation, dysmenorrhœa and severe menorrhagia Uterus found retroverted and slightly retroflexed, lying in the hollow of the sacrum Both ovaries prolapsed and tender Much tenderness and throbbing all about the uterus

Operation, April 24 Ligaments shortened about

four and one-half inches From observation in previous cases, I had come to the conclusion that failure to secure immediate union was in some cases due to traction of the ligaments upon the sutures To obviate this difficulty, I secured a silver wire to the end of each ligament, and twisted the ends of the wires together over a broad plate of hard rubber placed upon the pubes and between the lower angles of the wound, as shown in Fig 4 In other respects the wounds were closed in the usual way There was little or no swelling of the wounds, which healed by first intention Stitches removed one week after operation Later there was a slight discharge from the upper angle of each wound Highest temperature 99 9° F Four weeks after the operation patient was allowed to go upon her feet without other support than two small cotton pledgets At the present time, the patient is still under treatment for digestive disorders and nervous conditions, but the uterus is of normal size and in normal position, and patient has very few local symptoms of any sort The ovaries are out of reach, and apparently healthy

Case 9 Mrs M, aged 39 Had suffered with prolapsus and retroversion for fifteen years Had had good medical care, but found no relief, and for several years had been thoroughly broken down in health Suffered with all the symptoms which usually accompany the conditions named Upon examination, found the uterus retroverted and flexed, lying very low in the hollow of the sacrum Displacement easily reducible, but the organ would not remain in position

After a few weeks' preparatory treatment, I operated, April 20 Found ligaments exceedingly attenuated The right ligament was not more than 1½ lines in diameter The left was a mere filament, which broke in the attempt to secure it Shortened the right ligament five inches Secured it by two deep sutures of silver wire attached to lead buttons Wounds healed by first intention Ten days after the operation found the uterus partly retroverted, so that the fundus was felt in posterior cul de sac I feared the operation was a failure, as I observed that the posterior wall was closely adherent to the fundus, showing that adhesions were present which I had previously overlooked I think the oversight was due to the fact that the uterus was placed in position with perfect ease, which was made possible by the very relaxed condition of the vaginal walls Ten days later, on examination, found the uterus well anteverted, the fundus was easily felt in front, and could not be found behind The ovaries, which were previously within easy reach, could not be found From this time until June 3, when the patient returned to her home, the uterus remained in perfect position The patient was able to be about upon her feet as much as she chose, without support of any sort, yet the uterus showed no inclination toward prolapse or retroversion There was a notable decrease in the size of the organ, and the adhesion of the posterior wall to the fundus had disappeared This case was of great interest to me, as it demonstrated the ability of a single ligament, and that of very small size, to resist the strain not only of the weight of the uterus, but of the vaginal walls attached by adhesion, and ultimately to break the uterus loose from its attachments and restore it to a normal position The fact that the uterus remained so perfectly in position I attributed to the readjustment of the surrounding organs in their normal positions, and especially the return of the small intestines to their normal position behind the uterus When last seen, the patient was relieved of most of her former distressing symptoms, and was rapidly gaining in flesh and strength

Case 10 Miss H, aged 30, had been engaged as a teacher for many years Had suffered with constant weariness, severe pain in the lumbar region through the pelvis, and the general symptoms of nervous debility and obstinate constipation Physical examination showed retroversion and flexion, uterus lying low in the hollow of the sacrum, ovaries low and tender, also tenderness of the body of the uterus Patient had had much local treatment, was last under the treatment of an eminent specialist in St Louis, Mo All sorts of pessaries had been tried without benefit, and the patient had become a confirmed invalid

Operation, May 5 Both ligaments found and shortened about five inches Wounds healed by first intention, but afterwards opened slightly at the upper angles Highest temperature 100 1° F Patient left the ward 24 days after the operation, and has been steadily gaining since Is relieved of the lumbar and pelvic pain Bowels are regular Uterus and ovaries are in perfect position

Case 11 Mrs N, aged 47 Never pregnant The patient had suffered from complete procidentia and a great variety of local and general symptoms *for 11 years* Severe pain at menstrual period Eighteen months previously I had performed a posterior colporrhaphy by a modification of Simon's method, after which it was possible to hold the womb in position by means of a lever pessary Previous to this time the organ would not remain in position for five minutes when the patient was on her feet, without the aid of an inflated rubber ball The patient was very comfortable for a few months, when the pessary became displaced and began to give discomfort It was removed by her home physician, who did not succeed in again affording relief by the aid of a pessary She again consulted me March 23, 1887, when I found the condition as regards procidentia nearly as bad as before the operation

Operation performed May 9 Ligaments were small, and were not so much elongated as I expected to find them The uterus was drawn up as far as possible, but I was not able to shorten the ligaments more than 2½ inches Secured the ligaments over a rubber plate as in the preceding case, and closed the wound in the usual manner The left side healed by first intention The right side was not so fortunate The superficial portions of the wound healed by immediate union, but subsequently opened up and closed by granulation Highest temperature was 101°, which occurred eight days after the operation and was due to suppuration in the left wound Thus far the uterus remains in anteversion, and there is no sign of prolapsus, although before the operation the

prolapsus was constant, even when the patient was lying on her back

Case 12 Miss M , aged 33, has been an invalid for eight years, has been under medical care most of the time Very weak and nervous, unable to be upon her feet any length of time, and incapable of exercise of any sort Suffers with constant pain in pelvis, which is greatly increased at the menstrual periods, particularly in uterus and left ovary Profuse leucorrhœa Constant bearing down, and great distress in lower abdomen when on her feet On local examination found complete anteversion with anteflexion of first degree As all sorts of pessaries and other means of treatment had been employed without success, I determined to see what could be done for a case of this sort by Alexander's operation

Operation, May 31 Found both ligaments, which were rather small in size After freeing ligaments from their attachments, and before making traction upon them, I introduced one finger into the vagina and placed it upon the fundus of the uterus, which lay under the pubes, while the cervix was in the hollow of the sacrum With the finger of the right hand in this position, I made traction with my left hand upon the two ligaments simultaneously I felt the uterus dragged upward away from the finger of the right hand, it being lifted fully two inches upward and backward, where it was retained, the ligaments being secured over a rubber plate as in preceding cases The wounds were closed in the usual manner Since the operation the patient has been entirely relieved of the bearing down pain which she previously suffered more or less, even when lying in bed, although, of course, the result of the operation cannot be determined until she gets upon her feet

It seems to me that this case demonstrates not only the utility of Alexander's operation in cases of extreme anteversion, but also the erroneous character of the views which have heretofore been held by some gynecologists, in attributing anteversion to abnormal shortening of the round ligaments Thomas gives shortening of the round ligaments as one of the causes of anteversion, and in speaking of the changes which occur in the uterine ligaments in cases of anteversion, he further states "In anteversion the utero sacral ligaments are generally shortened, and there is no doubt that the round ligaments are similarly altered " The fact that the uterus was lifted bodily out of its abnormal position and drawn backward to its normal position by the round ligaments, and that it was found necessary to shorten the ligaments fully three inches, shows that anteversion as the result of abnormal shortness of the round ligaments is an utter impossibility It would also seem to demonstrate that shortening of the ligaments does not occur in anteversion—at least that a longer period than eight years is necessary even for the beginning of a change of this sort

It would seem that a consideration of the anatomical relations of the round ligaments, the internal abdominal ring and the uterus, would be a sufficient demonstration of the ability of the ligaments to raise the womb to its normal position and the impossibility of anteversion occurring as the result of shortening of the ligaments The point at which the round ligaments enter the inguinal canal is halfway between the spine and pubes, and the anterior superior spine of the crest of the ilium is opposite the middle of Poupart's ligament, so that, with the uterus in anteversion, the action of the ligaments is calculated to restrain the organ from extreme anteversion I am inclined to the belief that extreme anteversion cannot occur without elongation of the ligaments

[Since this paper was written, the patient has left the surgical ward, and has now been upon her feet for several weeks The uterus remains in perfect position, and she is quite relieved of the distressing "bearing down" of which she previously suffered I feared that when the patient should get upon her feet, the uterus would rapidly return to its old position under the pubes, but, to my surprise, the fundus has been steadily retreating from a half anteverted position until, at the present date, August 1, the uterus is in a position which would be perfectly normal were it not for the fact that the slight anteflexion which existed still remains It is necessary to introduce the finger to its full length in order to be able to reach the fundus]

THE RELATION BETWEEN ERYSIPELAS AND PUERPERAL FEVER, CONSIDERING ERYSIPELAS BOTH AS AN ACUTE AND A LATENT DISEASE

Read before the Section on Obstetrics and Gynecology, at the Thirty eighth Annual Meeting of the American Medical Association held at Chicago, June, 1887

BY A MACLAREN, M D,
OF ST PAUL MINN

Before proceeding to the discussion of this subject let me present to you, in as concise a form as possible, my definition for the term puerperal fever It is *not* a specific fever, as Dr F Barker would have us believe, but a disease due to the absorption, by a puerperal patient of some septic poison, this poison being absorbed either by the lymphatics or the veins at the site of some breach of continuity in the parturient canal It is then, in short, nothing more or less than septic fever, showing the same pathological changes and giving the same clinical symptoms as are seen in different surgical patients who have suffered from septic infection

In the year 1886 there were published two particularly valuable works on the subject of Obstetrics The first of these, Cazeau and Tarnier's "Theory and Practice of Obstetrics," with its 1,200 pages, does not make the slightest reference to the relation existing between Erysipelas and Puerperal Fever In Dr Mundé's appendix, however, there is this note bearing upon the subject "That the exanthemata cause puerperal fever I do not believe, for while after labor the material organism has lessened power to oppose the approach of disease, and is less able to withstand its inroads, scarlatina or other exanthem, when it appears at this time, still preserves its distinctive characteristics, though perhaps running an

unusually malignant course, yet we cannot call it puerperal fever" As Dr Mundé makes no mention of erysipelas, I understand that he here includes it with the exanthemata

The second work to which I refer is Dr Lusk's "Science and Art of Midwifery" There we find a very exhaustive *resume* of all the latest theories and investigations as to the nature and causation of puerperal fever, which Professor Lusk sums up in these words "Thus we find in surgical fever, in puerperal fever, in diphtheria and in erysipelas, the presence of a common element which links them together, and which establishes the relationship which has so long been recognized as existing between these various processes"

This connecting link of which Dr Lusk speaks is the chain-like micrococci which up to the present time have resisted all efforts at differentiation Among the workers and authorities in this field, he quotes such men as Koch, Lukomski, Dolčris, Samuel and Virchow, the last named author upholding this theory of bacterial origin in these words, "Especially in this connection are to be mentioned the *diphtheritic* process and the *erysipelatous*, especially erysipelas malignum The granular deposit in diphtheritically affected tissues, of which I formerly spoke, has more and more proved to be of a parasitic character" I have as you will see simply reiterated Dr Lusk's arguments and for two reasons, 1 I do not feel myself competent to discuss the bacterial element of the disease, and, 2 I whish to show the wide difference of opinion between the two schools as shown by these two eminent teachers, differences which would lead them widely apart in the treatment of puerperal fever and especially in the prophylactic treatment of the disease

Before leaving this part of my subject let me call your attention to Dr Joseph Kucher's work on "Puerperal Convalescence" Dr Kucher takes the position that Semmelweiss' theory for the causation of puerperal fever is the only true standard, and that the septic poison which produced the disease is probably the chain-like micrococcus In several places Dr Kucher takes the position that the poison of erysipelas can produce puerperal fever, mentioning cases to prove his position which I shall refer to later

There are many surgeons who contend that erysipelas is essentially a skin disease, with more or less severe constitional symptoms, and that we must have the skin eruption or else the disease cannot be erysipelatous in nature In Holmes' "System of Surgery," we find this sentence "It has been objected by Sir W Lawrence, who in this supports the views of Vogel and Hildenbrand, that to justify the notion of the mucous and serous membranes being affected by erysipelas, it must be shown that the same phenomena are observable in them as are seen in the skin" Holmes answers these objections in these words "Besides diffuse cellular inflammation, there are many diseases which do not produce the characteristic cutaneous inflammation of erysipelas, yet are *probably* closely allied to it, as e g, *phlebitis*, both external and internal, *inflamed absorbents* and puerperal fever The same may be said of some forms of inflammation of the mucous and serous membranes For though the inflammation of the skin is absent, yet if the constitutional conditions be the same, they must be regarded as pathologically identical with erysipelas, however the expression of the condition may differ, just as in *syphilis*, the same virus may produce simple chancre or phagedenic sore, or various forms of cutaneous diseases, or deep seated inflammation" The clinical fact that a puerperal woman my have a localized erysipelas of the skin in some part of the body, and *not* have puerperal fever is to my mind no *proof* that erysipelas cannot *cause* puerperal fever It is simply the woman's good fortune, for if the bacillus had been planted in the parturient canal instead of on the skin, the woman would have suffered from child bed fever instead of the much less dangerous skin disease

Allow me to offer in support of this theory a few cases in which the poison which produced the attack of puerperal fever seems to have been directly referable to an acute attack of erysipelas of the skin, and *not* due to the poison of another puerperal case

Case 1 Some years ago Dr A J Stone, of St Paul, was called to take the case of Mrs R, who was just starting in confinement *Mrs Dr Stone* had been ill for the preceeding 24 hours suffering with pain in the *back*, *face* and eyes, with rise of both temperature and pulse Wednesday morning Dr Stone delivered Mrs R, the labor being normal, O A position, with no apparent injury to the parturient canal Thursday Mrs R had a mild chill, but with no rise in temperature, accompanied however by profuse sweating Had severe pains in back, side and head, and considerable nausea Friday, another chill, but still no rise in temperature Saturday severe chill followed by temperature of 105°, and on this day the lochia for the first time became scant and very offensive Intra uterine injections given regularly every every two or three hours for the next six days, and on the 10th day after delivery the temperature became normal and patient went on to a complete recovery At this time there was *no* puerperal fever in St Paul, and neither Dr Stone nor his nurse had seen a case of this disease for over a year Dr Stone gave up the rest of his practice for the time, and attended solely to these two patients, Mrs R and his wife He now feels that the attack of puerperal fever was simply puerperal erysipelas carried directly from Mrs Stone to his patient Mrs B

Case 2 —I was called in consultation to see a case of puerperal fever by Dr M, of St Paul, who prefers to withhold his name Dr M was attending a case of facial erysipelas when called on March 4th to deliver Mrs D, of St Paul Labor normal, O A position 48 hours after delivery Mrs D had a severe chill with a temperature immediately afterwards of 105° F, pulse 120 Chill every day Lochia suppressed and rather offensive When I saw the patient she was suffering from a well marked case of puerperal pyæmia Examination showed slight tear of the perineum, lochia very scant and offensive Temperature 103 5° F, pulse 130 Patient died on the 16th of March, having developed metastatic abscesses in left ankle and in lungs The nurse had

not attended a case of puerperal fever for over a year Dr M had not seen a case of puerperal trouble for over six months, and both had attended any number of confinement cases in the meantime, all of whom had recovered without a single septic symptom

Dr Ambrose Guichard reports a case bearing directly upon this subject in the *Archives de Tocologie*, July, 1885 Mrs D at 27, delivered for the 4th time, Jan 17, 1885 Labor normal but rapid Jan 20th, patient had a chill, fever, diarrhœa, tenderness of abdomen, suppression of lochia, and became delirious Despite antiphlogistic treatment and intra uterine douches, patient died on Jan 30th of general puerperal peritonitis The husband of this woman, who occupied the same bed at night, had facial erysipelas when first seen by Dr Guichard, eruption having developed three days before the delivery of his wife The midwife who saw Mrs D immediately after delivery made no examination and had not been in any way exposed to puerperal fever

Dr Kucher makes the following quotation from Tyler Smith "In another case a medical man was in constant attendance upon a patient suffering from gangrenous erysipelas, and between Jan 8th and Mar 22d he attended the labors of ten women, all had puerperal fever, and eight of the patients died " This was in a town of moderate size, no other practitioners in the place were known to have had cases of puerperal fever Several hundred similar cases are recorded

Thus far in my review of this subject I have simply gone over the ground which has been so often argued *pro* and *con* throughout the medical world during the past few years Now let me ask your attention to another phase of this subject If the bacterial origin of erysipelas be *true*, *why is it* that certain persons seem predisposed to innumerable attacks of this disease? We have all seen many subjects in whom a slight indisposition brought on an acute attack of erysipelas and almost *always* located in the same area of skin surface, and these attacks *without* apparent exposure Is not the answer to my question, that the first attack of erysipelas has never been *cured* and that the bacillus still *lives* in the skin ready to break out into a fresh attack upon the slightest provocation? It seems to me that this must be the answer, *for*, the cases of predisposition, of which every text-book speaks, and which we have all seen, are too numerous to allow of the *supposition* that each one of them has been repoisoned If you grant me this then you must agree with me in the belief that a person who has suffered from an attack of erysipelas, and in whom the disease is dormant, or never has been cured, can communicate the disease to *an open* wound or to a puerperal woman

I have among my records a few surgical cases which seem to allow of such an explanation

Case 1 —Mr W , operated upon at St Joseph's Hospital Dec 7, 1886, by Dr C A Wheaton, of St Paul, for the removal of a large sarcomatous growth of the right thigh Every antiseptic precaution was used both during and after the operation Four days after the operation the patient had a chill, rise in temperature and developed erysipelas upon the leg, starting from the lower angle of the wound There was no erysipelas in the hospital, nor in the practice of Dr Wheaton or myself The nurse, however, one of the *best* and cleanest nurses whom I have ever met, had suffered with facial erysipelas some few months previous, she has shown no signs of erysipelas since, but I have *no* doubt that she still has the microbe of erysipelas living in her face or scalp

Case 2 —Oct 4, 1886, Miss B , operated upon by Dr Millard, of Stillwater, Minn , at St Joseph's Hospital, St Paul, for the removal of a 40 lb congenital perineal tumor diagnosticated to be *fœtus in fœtu*. The operation was performed in the new wing of the Hospital which had just been finished She was placed in a room never before occupied, with new bed and bedding, no erysipelas being then present in any part of the Hospital The patient was placed under the care of the same nurse of whom I have just spoken This nurse had been performing the executive duties of the hospital for several preceding months, and was only placed upon duty on account of the enlargement of the service and the scarcity of assistants The patient did remarkably well until the evening of the sixth day, when she had a severe chill The next succeeding day she developed erysipelas in the wound, which spread from there to the buttock and thigh of the right side She passed into a septic condition, from which she died on the 35th day, her physical condition corresponding very closely to that of a fatal case of puerperal septicæmia

Case 3 —Occurred at the same time on the person of a young lady upon whom Dr Wheaton had performed an Alexander's operation, and who was under the care of this same nurse, the wound upon the left side, which was almost entirely closed, seeming to be the starting point for the eruption which spread to the labia and inside of the thigh on the left leg There was no erysipelas in the Hospital nor in the practice of any of the physicians who were connected with either of these cases I have called the attention of both Dr Millard and Dr Wheaton to this theory for the causation of these cases of erysipelas, and they have both agreed with me in the strong probability, at least, of the truth of my explanation In looking back it seems that ever since the attack of facial erysipelas in this nurse, now over three years ago, ever since that time erysipelas has followed her, affecting apparently without cause her surgical patients Through the kindness of Dr Beal, of St Paul, I am able to present a number of puerperal cases which come in the direct line of argument

Dr Beal suffered from a very severe attack of facial erysipelas in the winter of 1885 In October, 1885, Dr Beal delivered Mrs G of her first child. Breech presentation I saw Mrs G , in consultation with Dr Beal, and applied forceps to the after coming head The labor was normal in every respect After examination showed laceration of cervix on the right side On the third day Mrs G had a very severe chill, followed by a rise in temperature, vomiting, pain in the back, head, and abdomen, with suppression of lochia Regular intra uterine injections and

a stimulating treatment were instituted but Mrs G died 16 days after delivery of puerperal septicæmia I never saw Mrs G after the night of her confinement, there was no other case of puerperal septicæmia in St Paul, so far as I could determine at that time, and I had not seen in the meantime a single case of scarlet fever, diphtheria or erysipelas, still my next case of confinement developed puerperal septicæmia on the third day after delivery

Mrs O, æt 21, primipara Delivered Nov 8, 1885 Labor tedious, head would not engage 36 hours after the commencement of labor she was placed thoroughly under the influence of chloroform, forceps applied and the head brought well down onto the perineum She was then allowed to deliver herself Female child weighing 9 lbs Slight tear of fourchette, not more than ¼ in in depth One hour after delivery, placenta not having come away after a thorough trial of Crede's method of expression and the patient being exsanguinated, the hand was thoroughly cleansed in bi chloride mercury solution 1 1000, and introduced into the vagina Two fingers were introduced into the uterus and the adherent placenta removed On the 3d day after delivery this patient developed a true case of puerperal pyæmia Intra uterine douches and stimulant treatment were of no avail, and she died suddenly on the 15th day from cerebral embolism The fact that it was found necessary to introduce the hand into the uterine cavity in this case, will probably be sufficient explanation to many of my hearers for this attack of puerperal fever, but still there seems to be a strong relationship between these two cases The same forceps used in Dr Beal's case were used in this case Out of 55 cases upon my obstetric records this is the only one whom I have delivered who has had the slightest septic trouble In several of my cases just as serious operative proceedings have been found necessary, and in several the hand has been introduced into the uterine cavity

In the spring of 1886 Dr Beal had a succession of puerperal fever cases The poison seeming to follow him so closely that he had at last to refuse to take any obstetric work As he expresses it, "Every woman that I saw during that last three weeks had a chill on the third day whether I touched her or not" During all this time Dr Beal used the most thorough and systematic antiseptic precautions bi chloride of mercury, baths, changing of clothes, use of nail brush and constant rinsing of the hands, but notwithstanding all this, nearly every woman had more or less puerperal trouble, with three fatal results

Mrs B, delivered April 2 O A position Forceps delivery The perineum was lacerated and was restored 5 hours after delivery by Drs Ritchie and Beal This patient had no trouble until the 9th day, when she had a severe chill, followed by a high temperature, pain in the back, head und abdomen Her child died in convulsions on this same day The patient had a chill every day until the 16th, when she died of puerperal septicæmia

Dr Beal's next case was Mrs H, who was in the 7th month of pregnancy Mrs H nearly aborted at the 5th month Her labor was normal Upon the 2d day after delivery Mrs H had a very severe chill followed by a temperature of 105 F, pulse small and rapid Lochia became scant, but not very offensive Suffered from pain in abdomen and back, very tender on pressure all about the uterus 3d day, chill followed by temperature of 105° 4th day, chill in the morning, temperature kept rising all day until evening, when she died of puerperal peritonitis, intra uterine douches having no effect whatever

About this time Dr Beal delivered Mrs T at full term, normal delivery, O A position On the 4th day she was found to have temperature 102° F, no chill Pain in the abdomen, was tympanitic and nauseated Suffered with a profuse diarrhœa Lochia became scant but not very offensive Until the 8th day patient slowly lost ground Temperature ranging between 102° in the morning and 103 5° in the evening Pulse high all the time On the 8th day the patient discontinued all medicine at the suggestion of a midwife, and Dr Beal did not see her again A physician who was called just before she died (on the 14th day) diagnosticated puerperal pyæmia, finding abscess in knee and in the apex of one lung

Besides these three fatal cases Dr Beal had several other patients about the same time and just before he gave up taking confinement casee, who suffered from mild puerperal attacks They had suppression of milk and decrease of lochia with rise in temperature, preceeded generally by a slight chill, all of these cases, probably 8 in number, recovered Every obstetric case occurring in Dr Beal's practice during this period had more or less trouble, excepting those cases which he delivered in the country Whether by chance or not every case in which he had to take a drive into the country went through confinement without any trouble After May, 1886 Dr Beal refused to take any confinement cases for the space of nearly a year At the end of that time he again commenced taking obstetric work, using every antiseptic care, but only to have another case of puerperal fever

There are several points of particular interest in all these puerperal cases The lochia, although suppressed, was not as offensive as in the majority of puerperal fever cases Intra uterine douches did not wash away as much detritus, shreds, clots, etc, as is usual The long drive in the open air seems to have been the means of preventing septic trouble in some of Dr Beal's cases

In conclusion let me review the main points of my argument briefly, presenting again my theory of latent erysipelas

1 Several of the latest investigators in the field of bacteriology claim that the poison of erysipelas surgical fever, and puerperal septicæmia or pyæmia is one and the same, and that they are to a certain extent interchangeable That when the poison from any one of these diseases is placed in the paturient canal at the time of labor, it will produce a train of symptoms which have been until lately classed together under one heading, i e, Puerperal Fever

2 Erysipelas being a disease due to a bacterial poison with a tendency to recurrent attacks without a second exposure, consequently the bacteria must

be able to live in the apparently healthy skin for an indefinite space of time

3 That the germs of erysipelas when living in this quiescent or dormant state, although they may not be able to excite an attack of erysipelas of the skin, may still under proper conditions produce either surgical or puerperal fever

In the first part of my paper I have presented a few cases on one side of a still unsettled subject In the last part I have offered a theory the truth or error of which time and careful investigation alone can prove

If my words may only cause a little greater care and the consequent saving of one material life I shall feel that I am more than repaid

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A NEW METHOD OF PRODUCING LOCAL ANÆSTHESIA OF THE SKIN

Read in the Section on Medicine, Materia Medica and Therapeutics, at the Thirty Eighth Annual Meeting of the American Medical Association, June 7, 1887

BY HENRY J REYNOLDS, M D ,

PROFESSOR OF DERMATOLOGY COLLEGE OF PHYSICIANS AND SURGEONS, CHICAGO PROFESSOR OF SKIN AND GENITO URINARY DISEASES, CHICAGO POLICLINIC ETC ETC

Various means have been adopted for producing local anæsthesia of the skin, but heretofore none has been to any extent a success Even cocaine, useful in most other tissues as a topical application, has absolutely no practical use as a local anæsthetic for the skin Though local anæthesia of the deeper parts may also be produced by the method which I am about to describe, I am only prepared to speak of its merits from a dermatological standpoint at present, but am nevertheless satified that the tissues can in this way be anæsthetized to a sufficient depth to render the method applicable in many cases to general surgery

As cocaine is the anæsthetizing agent, the method therefore relates only to the manner in which the drug is applied and its absoption induced Electricity is the means employed for this purpose Knowing that solutions of cocaine were not readily absorbed by the skin, and therefore produce no anæsthetic effect, Dr Wagner, of Vienna, about a year ago made experiments, the results of which he afterwards (*Wien med Blatt*, 1886, vol 9, p 161) presented to the Society of Physicians of Vienna in the form of a paper on that subject, with a view to ascertaining a more successful method of producing anæsthesia of the skin with this drug He found that by saturating the positive electrode of a galvanic battery with a solution of cocaine, applying it to the skin and then applying the negative electrode a short distance from the positive, with a moderate current on, that successful anæsthesia could be produced Since the publication of this article, though personally, as a rule, very skeptical regarding therapeutic innovations, I have been induced to make a number of experiments with the method, and to make frequent use of it in dermatological practice with quite a degree of satisfaction, and inasmuch therefore as I have in looking up the literature of the subject been unable to find any article touching upon the details or results of any personal experience with the method in this country, I feel justified in writing this article, in the hope that it may elicit discussion and the personal experience of others, and be the means of bring to the more general notice of the profession of this country a procedure which I deem of much importance in medical and surgical practice So far as I am aware, in fact, no article on the subject has appeared in medical literature other than the one just referred to With this apology, and without going into the details of my experiments, I trust that a brief description of the method and the results of my experience with it will be tolerated

Battery, strength of current, etc —I have used an eighteen cell McIntosh battery, but I think, in some cases, even a stronger current is necessary For reasons not necessary to discuss at present the Faradic current will not answer, neither will the negative pole of the galvanic The strength of the current must vary with the sensitiveness of the part, the size of the electrode, etc It is always necessary to use strongest current that can be borne, which may vary all the way from four or five cells (of the McIntosh battery) to twenty four, but for which no rule can be laid down, the only guide being the feelings of the patient and the experience and discretion of the physician Where the skin is very dense, the part not sensitive to electricity, and the electrode large owing to the greater surface necessary to be acted upon, (which thereby renders the current more diffused, and hence in a sense not so strong) the current must be very strong, requiring perhaps 24 cells of the McIntosh instrument The sponge on the electrode used for the solution should be of the finest and softest quality When a strong current is used the irritation at the negative pole may be avoided by using a larger electrode

Strength of solution —In my experience the cocaine should not be used weaker than a five per cent solution It may vary, however, owing to circumstances, from a two to a twenty per cent strength Where the skin is thin and the part such as will tolerate a strong current, a two to five per cent solution will answer On the other hand, if the part be so sensitive that only a weak current can be employed, as in portions of the face, the solution to be effectual must not be less than a ten per cent one

Mode of Application —Saturate the positive electrode with the solution and place it directly upon the part to be anæsthetized Place the negative electrode well saturated with water on some point near by A more remote point, as the hand of the opposite side, for instance, will answer, but it will take longer time and a stronger solution to get the effect than when placed near by In working about the face I think it is better to hold the negative electrode in the hand than to apply it to the face near the positive, as in this way a stronger current will be better tolerated

It is well for the operator to familiarize himself with the method by experiments upon his own person The electrodes should be kept firmly pressed

to the skin, the positive being now and then moistened as required with more of the solution, and the negative with more water If the negative produce much irritation it may be occasionally shifted to another place

Time Required to Produce Anæsthesia —This depends of course upon the location, the strength of the solution, the strength of the current, etc In the skin of the flexor surface of the forearm, if the negative pole be applied near by, a five per cent solution with about ten cells, say, of a McIntosh battery in good order, will produce profound anæsthesia in five minutes If the negative pole be placed in the hand of the opposite side about double that length of time will be required Whenever the skin is dense a longer time, stronger solution, and stronger current are necessary In any case, the current should be allowed to run as described till anæsthesia is produced, as ascertained by gently pricking now and then with some sharp instrument

Duration of Anæsthesia —This of course varies more or less also with the circumstances, as a rule however, the effect is rather transitory, lasting perhaps from five to fifteen minutes

Results in Practice —In the operation for the removal of superfluous hairs from the face by electrolysis, I have frequently used it In this operation, inasmuch as the tissues still conduct the current, an ordinary electrical sensation is experienced by the patient, but the sharp stinging, burning pain at the site of the needle, sometimes so acutely felt, is when the method is judiciously employed, entirely done away with In the removal of small warts, nævi, etc , from the face by the knife, it is even more satisfactory One obstacle in the way of its successful employment in certain portions of the face is the extreme sensitiveness of the part, owing to which condition a sufficiently strong current can not always be tolerated to induce the necessary absorption of the drug In a case of felon of the palm at the junction of the middle finger, I made a very careful effort with a ten per cent solution and sixteen cells of a McIntosh battery, to produce anæsthesia previous to lancing In this case the method as I employed it was not a success Failure in this case would be obvious for the following reasons *First*, the skin was very thick and callous, *second*, owing to the extreme soreness, not sufficient pressure with the electrode could be made to get the full benefit of the current, *third*, I think under the circumstances the current was not nearly as strong as it should have been In dental surgery I think the method can also be used to advantage I applied it in one case for Dr W H Gale, of this city, the patient was a lady for whom two teeth were extracted It is, of course, impossible to determine in such a case exactly how much benefit is desired from the procedure, but as nearly as could be ascertained, the pain in this case from the extraction was comparatively insignificant Ten cells of the McIntosh battery were used with a ten per cent solution

From the foregoing it will be seen that while under favorable circumstances complete anæsthesia of the skin may be in this way produced, like everything else, with our present knowledge of the method, it is not under all circumstances all that could be desired Notwithstanding, it has unquestionably, sufficient merit to warrant its recommendation to the profession and its general adoption by those in dermatological practice especially, and I am satisfied that with further experience, more, extended observation, improved appliances, and the more general adoption of the method, many of these apparent obstacles may be overcome

In conclusion I may summarize as follows

1 Complete anæsthesia of the skin may, under the proper conditions, be produced by cocaine applied in conjunction with the galvanic current

2 In dermatological practice, the method, which, for want of a better name, I may term "cocaine galvanism, galvano cocainism or galvano cocaine anæsthesia" is the best means for the purpose at our command

3 In dermatological practice, it is preferable to the hypodermic injection of the drug inasmuch as it is painless and frequently more effectual

4 The cocaine should not be used in less than a five per cent solution

5 The current should be as strong as the idiosyncracy of the patient and the sensitiveness of the part will permit

6 It is advisable in becoming familiar with its use for the physician to make some experiments upon his own person

7 All things considered, I think the method should be commended for general adoption in minor operations by those in dermatological practice

163 State Street, Chicago

DISCUSSION

DR SMITH, of Iowa, had used a hypodermic injection in removal of tumors

DR G W MCCASKEY, of Indiana Hypodermic injection can be used in surgical cases but is not necessary in all cases We cannot give electricity as accurately as we can cocaine Chloroform has been similarly used, but sometimes leaves an eschar Neuralgia of an intractable form has been cured by a hypodermic injection

DR FRANK R FRY, of St Louis I have experimented in applying cocaine I get best results by first washing the skin, and sponge well I do not use a sponge electrode but a small pad of muslin After using a small electrode I was led to use a large lead one, made in the shape of a band around the arm, protected by the muslin pad I put a pad of absorbent cotton soaked in a solution of cocaine, 10 per cent , for the negative electrode I have vesicated the skin previously Some patients can bear more than others

DR H N MOYER, of Chicago The action of cocaine is most resisted in superficial layers of epidermis We should use some neutral salt with cocaine, as we wish to aid passage of the cocaine through the animal membrane

DR H J REYNOLDS, of Chicago I did not mean that hypodermic injections were more useful than this method in superficial operations As a local

anæsthetic topically cocaine is not so useful Sebaceous matter may prevent absorption, hence we may use an alkaline wash The galvanometer is imperfect If we use a large electrode the current is diffused We do not use very powerful currents in this affection Where the skin is very sensitive the amount cannot do much damage, and the feelings of the patient are sometimes a good guide

DR M R CRANE, of Vermont I have scraped off the scarf skin and had good effects with 8 or 10 per cent solution of cocaine Patients do not object to this scraping The same size of electrode causes different effects upon different persons

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AN UNAVOIDABLE DEFORMITY AND DISABILITY WHICH FOLLOWS CERTAIN CASES OF OUTWARD DISLOCATION OF THE FOOT

Read in the Section on Surgery at the Thirty Seventh Annual Meeting of the American Medical Association, June, 1887

BY E A WOOD, M D,

OF PITTSBURGH PA.

The dislocation outward of the foot at the ankle-joint is, in certain cases, followed by deformity and disability defined as follows Enlargement of the distal end of the tibia, increased prominence of the internal malleolus, increased malleolar space, turning of the foot outward, the axis of the foot presenting outside the axis of the leg, tenderness in and about the joint, pain when weight is borne on the foot, and inability to walk unaided

The difficulty is often attributed to "weakness," to incomplete reduction of the luxation, to too early exercise, to neglect or ignorance on the part of the surgeon, to neglect or carelessness on the part of the patient The blame is not always placed where it rightly belongs, and that this may be done hereafter is the object of this paper

If the nature of the trouble is not comprehended the patient will lay the blame on the surgeon, while the latter must feel embarrassed with doubts No more annoying dilemma can be conceived of in the practice of surgery, than where the surgeon cannot explain nor the patient comprehend the true character of a deformity and disability like the one under consideration Ignorance on one side or the other is always the cause of suits for malpractice

I have never known the deformity to exist except in cases of outward dislocations of the foot at the ankle joint In simple dislocation of the foot outward, the foot is rolled outward, and carried outside the axial line of the leg, carrying with it the external malleolus, the tibio tarsal ligaments are completely ruptured, and the external malleolus forms a tumor which may touch the floor should weight be borne on the injured limb

This, briefly, is the common dislocation, which is readily reduced, easily kept in place by suitable dressings, and which recovers without deformity or disability But suppose we have this simple luxation *plus* something more, suppose a person of heavy weight falls from a considerable height with such force as not only to dislocate the foot outward, but also to drive the end of the tibia against the ground or floor, where it receives all the weight of the body and the impetus of the fall, then it is obvious that we have something more serious than a dislocation That something more serious will be an injury to the distal end of the tibia in the shape of a severe contusion, or a split in the bone, or an impacted fracture, or all combined The tissues of the tibia and its articular surface will be severely injured

But in a case like the one presented the luxation is the most apparent, as it is the all absorbing lesion, the displacement is readily reduced, or perhaps it was reduced before the arrival of the surgeon who is to treat the case, and the most serious injury, the injured tibia, is lost sight of The dislocation is patent, the injury to tibia obscure The foot is out of place, there is no alteration in the outline of the tibia, and all pain and shock is attributed to the wounded ankle joint There is no trouble in reducing the dislocation or in keeping the parts *in situ*

In the case under consideration it is not the dislocation, but the obscure injury of the tibia, that is the cause of the subsequent deformity and disability An uncomplicated outward dislocation of the foot, if fairly treated, will get well in a reasonable time, and get well without deformity or disability, a severely injured tibia will likely result in inflammation with its consequences, as thickening of the periosteum, interosseous deposit, thickening of the articular cartilage, hypertrophy

In outward dislocations of the foot complicated with severe wounding of the distal end of the tibia, there will likely follow inflammation and enlargement of the part inflamed This enlargement will be not only circumferential, but longitudinal as well Bear in mind that, while the ruptured tibio tarsal ligaments offer no resistance to the encroachment of the elongated tibia on the joint space, thus shoving the astragalus before it, on the other side the fibulo tarsal ligaments, by being intact, firmly prevent the outer side of the foot from receding The result of these two opposing forces—the elongated tibia and the intact external lateral ligaments—will be the rolling of the foot outward

Another cause of the deformity is the enlargement of the circumference of the tibia, by which the intermalleolar space is increased Now, as the fibulo tarsal attachment is firm, while the tibio tarsal is loose, the foot will be carried along with the lower end of the fibula outside the axis of the leg The astragalus cannot fill the abnormally widened intermalleolar space, and, being firmly attached to the fibula, it must cling closely to that bone, and leave a space between the internal articular facet of the astragalus and its articular surface on the internal malleolus Besides, the thickened articular cartilage of the tibia will have changed the plane of the joint

Can the deformity be prevented? It is not a question pertaining to the dislocation, but one relating to an injured tibia, then, can the enlargement of the tibia be prevented? Whatever of uncertainty there may be in regard to the question of prevention, it is certain that timely and protracted treatment is nec-

essary, and that by such treatment we confine the deformity to its minimum

Let us take for consideration a case of outward dislocation of the foot complicated with severe injury of the end of the tibia Let us suppose that it is at the end of the third or fourth week No trouble was had in reducing the luxation nor in keeping it in place There was no manifestation of the latent mischief, except more pain and feverishness than usually attend simple dislocations But at the end of three or four weeks the surgeon, on removing the dressings, notices that the internal malleolus is more prominent than it should be, that the foot inclines to roll outward, and that the foot is slightly outside the axis of the leg He may also notice that the ankle is more swollen, tender and painful than usual in ankle dislocations These features, however, are but slight, and unnoticed by the patient, and indicative of a tendency to rather than actual deformity The surgeon is apt to attribute them to faulty dressings, and accordingly he adjusts these to overcome the slight deformity or tendency to deformity At the next dressing the surgeon learns that he has not succeeded, that the trouble persists, or is even increased, and he again adjusts the dressings to overcome the trouble, but weeks roll round and the deformity becomes more pronounced If the surgeon be a keen observer he will have learned by this time why the trouble persists, he will have discovered that the lower end of the tibia has enlarged, and that the intermalleolar space has widened He could not prevent all deformity if he would No justifiable force would bring the malleoli close enough to clasp as they should the articular process of the astragalus

After two or three months, during which time special efforts have been made to prevent the threatening deformity, the dressings are finally removed and the patient left to himself and a cane At this time the deformity is not great, *but the tendency to deformity is very great*, and the disability of the joint is almost total The special dressings have held the deformity in check, but all dressings removed and weight borne upon the injured ankle, and the ruin at once becomes apparent even to the patient and his friends So slight, apparently, was the deformity when the dressing were left off at the usual date in dislocations, that the inexperienced surgeon will incline to believe that rest and splints have done all they can do, and that exercise will complete the cure of the injured joint Fatal mistake! It is of the utmost importance that rest and splints should be continued In no other way and by no other means can we keep the deformity and disability within their smallest limits A steel support reaching from foot to knee, as in *talipes valgus*—a deformity our case much resembles—should be constantly worn when out of bed Under no circumstances should the injured limb be subjected to weight unless the ankle is supported by an efficient splint, and this adequate support must be kept up until the tenderness, pain, and weakness have disappeared, which will certainly not be short of a year, and it may take two years

But the inexperienced surgeon of our hypothetical case, at the end of two or three months, surrenders his patient to a cane and exercise The patient begins timidly to bear some weight on the injured ankle Even slight weight brings discomfort, but being a determined fellow, and being told that exercise will strengthen the foot, he bravely walks on the foot with the aid of his stick, but it is a limping, painful gait, growing more painful every day until the disability of the ankle is complete In alarm he sends for his surgeon to "break the leg over" The removal of the sustaining splints and the bearing of weight on the ankle result in displacing a foot that was not tied in its place by internal lateral ligaments What was only a slight displacement, but a great tendency to displacement, has by injudicious management become an ugly deformity and a painful disability

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CLINICAL NOTES ON THE TREATMENT OF PULMONARY DISEASES BY SATURATED VAPORS AT A HIGH TEMPERATURE

Read before the Mississippi Valley Medical Association, at Crab Orchard, Ky., July 14, 1887

BY G W McCASKEY, A M, M D,

PROFESSOR OF DISEASES OF THE CHEST AND THROAT, FORT WAYNE COLLEGE OF MEDICINE, FELLOW OF THE AMERICAN ACADEMY OF MEDICINE, ETC

The use of saturated vapors at a high temperature in the treatment of pulmonary diseases was made the subject of a paper presented by the author to the Section on Practice of Medicine, etc, at the late meeting of the American Medical Association, in Chicago To that paper, which is published in THE JOURNAL of July 23, I must refer you for a full discussion of the principles upon which the treatment depends The importance of the subject of topical medication of the lungs can scarcely be overestimated The meagre successes which have heretofore crowned our efforts, instead of repressing the true spirit of scientific investigation, can only serve to spur it on to renewed attempts The accessibility of the respiratory organs, although not so easy as at first thought might appear, is yet sufficient to fully justify the therapeutic methods in question

The advantages of saturated vapors at 140° to 160° F over other forms of medication, seem to me sufficiently apparent in the light of acknowledged laws and a considerable clinical experience It is for the purpose of calling attention to this clinical experience, which was necessarily crowded out by the purely scientific discussion in the paper above referred to, that this subject is again presented It is not my intention to offer a record of cases from my note book, but rather to speak of the clinical methods and results in a more general manner A little consideration must first be given to the technique of the special form of apparatus which my experience and experimental investigations have led me to adopt

The apparatus, which I herewith present to you, is capable of holding at a complete degree of vapor saturation one cubic foot of air This quantity will more than supply the respiratory volume for one

minute, however deep the respirations may be, and the same quantity can be heated and saturated in about that length of time, so that a uniform condition can be maintained The only appliances required in addition to the vaporizer are a spray tube and a compressed air cylinder When the air in the vaporizer has been heated to the desired temperature, or while it is being heated, a dense spray is thrown in This spray, entering the heated atmosphere, is instantly vaporized, and this whether it holds in solution volatile or non volatile agents So far as I know this is the first effort at a systematic and scientific application of saturated vapor to the respiratory organs by a mechanism which is constructed with a view to meet the physical conditions present The dry and wet bulb thermometers furnish an accurate means of estimating the quantity of medicine held in solution in the vapor, even to the minute fraction of a grain, while the reduction of temperature which it undergoes in passing into the respiratory organs, in so far as that can be estimated, furnishes an accurate measure of the quantity deposited

As I have pointed out in the paper already referred to, air saturated at 158° F is more than 30 per cent vapor , and assuming that the respiratory organs would cool it down to 113° F , it would deposit 69 per cent of its contained vapor These figures are not based upon hypotheses, but are simply mathematical statements deduced from incontrovertible and fully accepted physical laws The condition of this medicine when deposited upon the mucous lining, is that of a liquid holding in solution the medicine contained in the original menstruum, and of precisely the same strength There are no problematical factors or additions, as in the case of the steam atomizer, where the steam mixes in uncertain proportions with the pulverized solution The secretion with which the mucous lining is constantly bathed is of course an obstacle to the local effects of the medicine But this objection applies to all other methods of topical medication, and with even greater force than to this If the deposit of vapor is kept up sufficiently long, the mucus must be correspondingly diluted and thinned, and the structures beneath rendered more accessible

Whatever hypothetical objections there may be, however, to the local action of agents applied to the respiratory lining, they are completely refuted by the results of clinical observations The rapid absorption of vaporized anæsthetics, along with many other facts, clearly proves that the mucus which bathes the bronchial lining is not such an impassable barrier as some would have us believe Besides all this, let us not forget that the mucous glands, and consequently the mucous secretions, are entirely absent, not only from the alveoli and air cells, but also from the bronchial tubes of small size [1] Consequently any agents carried into the small bronchial tubes finds no tenacious mucus, or any other kind of mucus to guard the structures beneath

The sensations of the patients, in so far as these can be trusted, are proof of the deep penetration of the vapors, if any proof were needed A feeling of warmth pervades the entire chest, its intensity depending upon the temperature of the vapor, together with the depth and number of consecutive respirations Occasionally considerable coughing is produced But in the large majority of patients toleration is soon established Also in some patients a sense of suffocation is produced by the vapors of higher temperature, which can not be overcome One or two patients could not respire above 130° or 135° F

The quantity of spray required for each treatment is quite large About ℥iss–ij of solution will be converted into spray and vaporized for each treatment of ten minutes' duration I use an air-pressure of about 15 lbs , and keep the spray going during about one half or two thirds of the time of the treatment, relying, of course, upon a comparison of the thermometric scales as to the completeness of saturation So long as the wet bulb thermometer stands as high as the dry, no additional spray is required, as it would simply fall to the bottom, the air being already charged to the fullest extent possible

My experience has been principally in the treatment of phthisis and bronchitis, in both of which diseases I have used pneumatic treatment in combination with the saturated vapors My opportunities for comparison extend over a period of about fourteen months, during which I have treated about sixty cases Increased intra pulmonary pressure has been used in nearly all the cases, and a comparison can only be made under similar conditions between the use of the vaporizer, and simple spray or the steam atomizer As regards sprays at ordinary temperatures, I have no hesitation in pronouncing them comparatively inefficient in lesions of the deep respiratory passages I do this from both theoretical considerations and practical observations, and with a full recognition of their value, and, indeed, their superiority in laryngeal and tracheal inflammation Aside from their failure to adequately reach even the deep bronchial structure, sprays have a very objectionable feature in the treatment of lesions located here, in their profuse deposit in the mouth and throat where they are not needed

The steam atomizer fills the indications much more completely, but lacks in the very essential elements of precision, and complete control, both as regards strength of medicine used, and temperature of application The steam atomizer, although much superior to the ordinary spray, can not be made effectually to do the work of the "vaporizer"

I have lately been using a 1 per cent solution of carbolic acid in the treatment of phthisis and the purulent stage of bronchitis Although it is not open to demonstration, and therefore must be asserted guardedly, yet I am very fully convinced that the vapor, aided by the mechanical effects of increased air pressure, does penetrate, and is deposited upon, the walls of patulous tubercular cavities The modification of secretions and of general symptoms can scarcely be explained upon any other hypothesis, besides which the physical laws and conditions are such as to fully justify this explanation

[1] Landois vol 1 p 220 Frey's Histology p 450

A variety of other agents has been used, especially $HgCl_2$, 1-1000 to 1 2000, but I think the best results have been obtained by the use of carbolic acid

In the treatment of laryngeal affections I do not think that saturated vapor offers any advantages over the common spray or steam atomizer The quantity of medicine deposited in the larynx is probably not so large as it would be with the spray or steam atomizer, but I think that theoretical considerations and practical results justify the conclusion that for the deep portions of the respiratory tract it is greatly superior to these or any other method with which I am acquainted

With the combined effect of pneumatic treatment and saturated vapors, I have seen expectoration diminish and the pathogenic organisms of phthisis grow less and disappear I do not mean to say that this has been the rule, for with this or any other treatment at present known the arrest of advanced phthisis must be the exception, and a fatal termination the rule But I think that a method of treatment which appeals so strongly to our judgment through our knowledge of physical laws, is at least entitled to careful and thoughtful consideration

In many cases of intractable bronchitis the results have been so signal as to remove all doubts, in my own mind, regarding the superiority of this method These patients have been treated almost to the exclusion of the whole list of nauseant expectorants, the principle effect of which, in my opinion, is to disturb digestion and destroy appetite There is an *a priori* absurdity in mixing a teaspoonful of an expectorant mixture with some fifteen or twenty pounds of blood, as is done after absorption, and then expect a tangible result upon an extensive inflammatory process involving almost the entire bronchial lining The dose, when it reaches the lungs through the laboratory of the portal circulation, has reached so many "dilutions" that it ought to satisfy the views of Hahnemann's most ardent disciples While very far from denying internal medication a legitimate place in the therapeutics of pulmonary disease, yet I would make it as subordinate as it is acknowledged to be in the treatment of other inflammations as accessibly located as these When dealing with a cystitis or pharyngitis, or even a gastritis, we do not rely upon the introduction of medicinal agents into the circulation, from thence to reach the seat of morbid action by a circuitous route, and in infinitesimal dilution But we apply our remedial agents to the diseased focus by means of the catheter, the gargle or probang and the siphon tube or stomach pump Constitutional measures are not neglected, but they are not relied upon as the principal method of treatment

The future, nay I believe the present therapeutics of certain pulmonary diseases must rest upon this basis of local therapeutics, backed up by such constitutional measures as will improve nutritive processes in general, and consequently those of the lungs in particular

Ft Wayne, Ind

CEREBRAL SOFTENING, WITH REPORT OF A CASE

BY C N BLOUNT, M D,
OF HAGERSTOWN, IND

Daniel N, aged 52, carpenter, twenty five years before his last sickness was suddenly attacked with a severe convulsion There were no premonitory symptoms, excepting that for a little while before he stammered in attempting to talk He had about twenty convulsions in all The paroxysms were very severe, occurring sometimes once or twice a day, and then a day or two would intervene before their return, and thus continuing until they entirely ceased in a short time There was no tendency to a return of the convulsions until his last sickness There was no paralysis except aphasia for a short time He was an invalid, however, for about a year, when he was sufficiently restored to resume his trade, which he continued during the intervening years till his last sickness He did not seem in any way different from his former self excepting a loss of memory His wife thinks that his memory was more defective in every way than before the attack, but especially in remembering where he had placed anything he had been using

There was a small tumor on the back of his head, which gradually grew during these years to a diameter of three inches He occasionally complained of severe pain in it It was there long before the above mentioned attack

In April, 1885, the tumor was removed by the knife After the operation he continued at work until October, when he was compelled to give up His wife thinks, however, that he was never well after the operation He was peevish, fault finding and very irritable, becoming very angry at little things He now frequently complained of headache, which daily increased He would sometimes say that the old pain was in the back of his head, and would think that the tumor was returning For a month or more before he took to his bed, he was very much indisposed He acted strangely, slept badly, was feverish at night, complained of numbness of limbs, was costive There was no nausea, and his appetite was good all the time He persisted in being at work up to October, 1885, when he had to take his bed

He occasionally had slight convulsions during October, November and December Sometimes during the summer he would forget words, but this was now much more noticeable Most of the time during his sickness he had hemiopia, a few times he had diplopia He spoke of this last trouble only on two or three occasions, but the hemiopia was rather persistent There was a gradual failure of both physical and mental forces until he was a complete physical wreck and demented, taking no interest in anything During the latter part of his sickness there was partial paralysis of the right side, more marked in leg than arm There was also paralysis of the tongue and muscles of the pharynx This was very distressing during the last two months of sickness He could scarcely speak or swallow He became very much emaciated, and died in April, 1885, about one year after the removal of the tumor

Dr Buntin and I made an autopsy in the presence of Drs Moore and H C Boyd On removing the calvaria the brain appeared a little flattened, the cortical vessels were much enlarged, giving the surface a pinkish color Having loosened the brain and lifted it from its bed, on inspection it did not seem to be extensively diseased The cortical portion of the posterior lobe seemed thinner and much paler than that of the other lobes On separating the hemispheres we found the entire covering a thin shell not more than one fourth inch in thickness The brain tissue of each hemisphere was softened to about the consistency of custard, and was of a grayish white appearance There was not any healthy brain tissue in either of the hemispheres, but the entire cerebral substance was softened and broken down The cerebellum was healthy, save that at a few points it seemed to be softening

Edes, in Pepper's "System," says "A general softening of the whole brain does not and cannot occur, since a vascular lesion sufficient to cause anæmic necrosis of the whole brain must cause death before softening would have time to take place" Here was a case in which the blood supply was cut off from both cerebral hemispheres and softening did take place throughout the entire cerebral portion of the brain, and the man lived seven or eight months, or perhaps twenty six years, while this process was going on We did not in this investigation examine the vessels as we should have done, but we know that they were completely plugged, for there was not a remnant of a vessel in all this soft mass of matter If Edes included in his statement the cerebellum, of course he must be correct, but if he means the cerebrum alone he is mistaken, as demonstrated by this case The left side of the brain is the one usually softened, because the vessels of that side are more readily entered by an embolus The middle and anterior cerebral vessels are branches from the internal carotid, the posterior cerebral from the vertebrals They are united by communicating vessels at the base of the brain, forming the circle of Willis They make such a perfect anastomosis that if either trunk were obstructed by an embolus, thrombus, or any other cause, before the communicating branch is given off, the brain would still be nourished by means of this very wise anatomical arrangement If, however, the obstruction should occur beyond the communicating branches in either vessel, that part of the brain receiving its nourishment therefrom must become anæmic and die, because these vessels do not anastomose as vessels in other parts of the body, and hence a collateral circulation cannot be established to nourish the portion of the brain thus deprived of its blood supply If paralysis exists it is usually on the right side—the left brain being more frequently softened The topography of the brain is so well understood that an expert can almost always locate the part of the brain deprived of its blood supply—but he cannot so readily differentiate the particular form of the trouble or character of the lesion producing the symptoms in a given case My observation of such cases has been too limited for my opinion to be of much value I saw the case reported about three months before death Having the history given as above detailed, and reasoning from it, I was inclined to think that there was a tumor that had existed for a long time, and that it had produced the former symptoms, and that from some cause, it had not been growing until, on the removal of the external tumor, it took on new action and produced all the symptoms present If that was not the condition, then I thought that beyond doubt there was much softening—which was found

Da Costa says that there are no pathognomonic symptoms the presence of which would enable us to declare, without hesitation, that we are dealing with a case of softening of the brain, or the absence of which would justify us in concluding that it does not exist Nothnagel says the diagnosis of hæmorrhage, embolism or thrombus cannot, in any given case, be unreservedly made

MEDICAL PROGRESS.

Treatment of Burns and Scalds —Professor Mosetig, during the last five years, has treated with iodoform forty eight severe cases of burns and scalds with the most satisfactory results The danger of iodoform intoxication in burns, he believes, is merely theoretical, as neither he nor others who treated burns with iodoform had, when using certain precautions, ever met with bad concomitant effects The action of iodoform is twofold—it is both analgesic and antiseptic The patients, according to Dr Mundy's experience, which Prof Mosetig fully confirms, obtain ease a few minutes after the application of iodoform to their burns, and are soon fit to be moved The patients, in Prof Mosetig's wards, repose quietly and without pain in their beds, they recover more rapidly, with only moderate and consequently less exhausting discharges, and with smoother cicatrices, than those differently treated, and if there is no possibility of saving the life, euthanasia at least is procured Iodoform, although inert against the dangers to life from oligocythæmia and the nervous shock, guards against the danger of sepsis

Prof Mosetig, differing from the majority of surgeons, uses iodoform in very limited quantities only He either does not employ the powder at all, or when so in rare instances, he sprinkles it by means of an insufflator in very thin layers, only on those places where the integument has been burnt in its whole thickness, and has assumed a parchment like appearance As a rule he covers the injured parts directly with compresses of iodoform gauze, not prepared in the usual way, by thickly dusting the gauze with the powder, but by impregnating with an etheric solution of iodoform the purified gauze, which has previously been freed of grease He proceeds in the following manner After opening and excising the vesicles, and cleaning the burns with cotton-wool, which had been steeped in a ½ per cent solution of table salt, and well pressed out, he covers the wounds with dry compresses consisting of several layers of iodoform gauze, prepared as stated above, of corresponding

size, which are exactly and smoothly laid over the whole surface of the injury Over this an equally large or somewhat smaller piece of gutta percha tissue is placed, taking care that it does not form folds or creases The whole is wrapped in a very thick layer of medicated absorbent cotton wool which overlaps to a great extent the compresses, or, better, surrounds the whole limb or injured part of the body This cotton wool is finally fixed by several turns of bandages, which at the same time exert a gentle pressure This simple dressing, which, moreover, has the advantage of taking up very little time, is allowed to remain, without being changed, as long as possible, *i e*, as long as cleanliness permits, and no rising of the temperature takes place

The secretions from the wound drain off beneath the gutta percha tissue, and are taken up by the absorbent cotton wool Slight staining of the bandage is no sufficient indication for renewing the dressing, which ought to be permanent, in case of real imbibition and offensive smell, only the external dressing has to be removed and changed, the iodoform gauze, and the gutta percha covering, however, should not be interfered with

In case, in the meanwhile, fever should set in, which betrays by its character septic causes, generally the demarcation and separation of the mortified part having commenced, or a retention of the secretion of the wound having taken place, the dressing must be removed, the abscess opened, and free discharge of the pus secured the mortified shreds and the eschars must be removed by means of forceps and scissors The new dressing is put on in the same manner as the first one

The impermeable covering of gutta percha tissue is very essential, and ought never to be omitted, because the drying on and sticking to the wounds of the gauze, stiffened by the imbibed secretions, is always injurious, and may moreover cause, like a scab, retention of the secretion The discharge may be allowed to dry in the external portion of the dressing, but never on the wound itself

By the permanent iodoform dressing, the infection, both by the air and by contact, is prevented, and burns of the second degree, as a rule, heal under a single dressing, in burns of the third degree, aseptic separation of the eschar, with but slight secretion, frequently takes place, and even if the latter be not the case, the granulating surfaces heal in a far shorter time, and the cicatrization is smoother, more even, and altogether less disfiguring than in non aseptic treatment

In burns and scalds of the face the mode of dressing described will, of course, be impossible, instead of it an iodoform vaseline ointment (1 20) is employed, and covered with a mask of gutta percha tissue The ointment has to be daily renewed, and is always spread on to the thickness of a knife blade —*London Medical Record*, July 15, 1887

SYMPATHETIC AFFECTIONS OF THE EARS —DR F W BENNETT says

Two cases which have occurred recently in my practice seem to present examples of a sympathetic relation between the ears The first was a man, aged about 25, who had suffered from deafness for several months The hearing distance on either side was about six inches On examination mucus was diagnosed as being present in the middle ear on both sides I incised the membrane on the left side, and by syringing through a Eustachian catheter removed a considerable quantity of mucus The hearing distance increased so more than two feet To my surprise, there was a corresponding improvement on the other side, this latter was, however, only temporary, and had disappeared three days later The left ear continued much better, but no further improvement occurred on the right side until I removed mucus by incision

The second case is more interesting A painter, somewhat anæmic, complained of recent deafness and pain on the left side, with constant humming on the right On examination, I found a recent collection of cerumen on the left side, but nothing abnormal on the right I syringed away a soft ceruminous plug from the left ear, when the patient said that not only had the deafness and pain gone, but the humming on the right side had ceased

Possibly in the first case excitement, due to the unpleasant operation, so stimulated the auditory nerve as to render its perceptive power temporarily greater In the second case, however, there was no excitement, no prolonged syringing was required, and nothing whatever was done to the right ear I could not but conclude that the soft plug had sufficed, in the patient's anæmic condition, to set up irritation, causing pain on the same side and tinnitus on the opposite —*The Lancet*, July 30, 1887

INTRAVENOUS INJECTIONS OF ARTIFICIAL SERUM IN CASES OF ACUTE ANÆMIA —The *Paris Medical* publishes an interesting communication of DR PREGADINO concerning subcutaneous injections of artificial serum The author experimented on a large number of dogs, which after considerable and rapid loss of blood, revived after having had artificial serum injected into their veins The saline injection, or artificial serum, is composed of 6 grammes of pure sea salt dissolved in 1 litre of boiled water, and then filtered Before injecting, care must be taken to render the skin as aseptic as possible by washing with antiseptics The injection should be made at a point where there is plenty of cellular tissue, from 20 to 30 cubic centimetres of liquid per dose In all, the quantity injected must be about one half of the quantity of blood lost A slight massage aids the diffusion of the liquid The syringe must be aseptic The sensibility being deadened by loss of blood, there is not very much pain The immediate results of the injections are renewed sensibility, cessation of contractions, and of cardiac pressure, followed by progressive return of vital manifestations The process is simple, free from danger, and sufficiently rapid for acute cases The author recommends its trial on the human subject —*London Medical Record*, July 15, 1887

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RELATION OF ERYSIPELAS TO PUERPERAL SEPSIS

DR A MACLAREN, of St Paul, in a paper appearing in another column, reports a number of cases of puerperal sepsis, alleged to be caused by erysipelas His argument is, briefly A woman is attended during a normal confinement by a medical man, who had been exposed recently to erysipelas or was himself the subject of the disease The woman has puerperal fever There is no epidemic of puerperal fever, at that time in St Paul, possibly, not even another case Ergo, erysipelas is the probable cause of the puerperal fever It seems scarcely necessary to point out the fallacy in this mode of reasoning Dr MacLaren premises his paper by a statement of the Semmelweis[1] theory of puerperal fever,—that "Every case arises from the absorption of decomposing organic matter from lesions of the genital tract" He accepts this theory

The possible sources of infection are well nigh innumerable Puerperal sepsis, itself, is only one cause, and its exclusion, when it is possible, does not, of course, eliminate all other sources of infection except erysipelas The responsibility for infection attaches primarily to the physician and nurse The nature of the antiseptic precautions—whether adequate or not—upon the part of these attendants, is not stated specifically by Dr MacLaren No logical conclusion with reference to the relation between erysipelas and the cases of puerperal sepsis, reported in the article under discussion, can be drawn So far as Dr MacLaren's argument is concerned, erysipelas may have caused the puerperal fever, or it may have sustained no causal relation whatever The experience of the practitioner, mentioned in the paper,—"Every woman that I saw during that last three weeks had a chill on the third day whether I touched her or not,"—reminds one forcibly of Rutter's sad history, and the fetichism of the pious and venerable Meigs The latter accomplished obstetrician once remarked that Dr Rutter was "merely unhappy in meeting with such accidents through God's providence" He also propounded the question, "Did he distil a subtle essence which he carried with him?"

The causal nexus between erysipelas and puerperal sepsis is a traditional belief especially among English and American observers The best textbook on the diseases of the puerperal period, in the English language, with which we are familiar, contains the following statement "Many physicians still doubt or deny that diphtheritis or erysipelas can cause puerperal fever because they have seen diphtheritis and erysipelas in normal childbed In diphtheritis we have a putrid wound in the throat, and in erysipelas a phlegmonous inflammation The secretions of either affection may produce septic infection when brought in contact with fresh wounds of the same patient, and do not infect the system at the place of origin when the avenues to infection are closed" The view, thus clearly expressed, is doubtless the safest as regards practice, in the present state of knowledge The statement, however, that the causal relation between erysipelas and sepsis, in general,—puerperal sepis, in particular,—has been demonstrated, is not true

Regard, for a moment, a little of the recent literature of this subject Volkmann[3] has emphasized the importance of clearly distinguishing erysipelas, as a disease *sui generis*, from the phlegmonous processes Matthews Duncan[4] has shown by the London mortality records, 1848–1874, that puerperal fever is not an epidemic disease, in the true sense of that term, and that there is no coincidence in point of time between the prevalence of erysipelas and that of child bed fever Hugenberger[5] has pointed out the fact that erysipelas is a very infrequent complication of the puerperium Out of 7536 puerperal women, in the Lying in Hospital of Moscow,—1876–1877—erysipelas was observed once in every 500 cases, and

[1] Aetiologie des Puerperalfiebers 1861 pp 52 103 Semmelweis demonstrated that child bed fever was caused by (1) cadaveric poison (2) discharge from carcinomata (3) pus from a penetrating wound of the knee joint From these facts he arrived at his universal proposition by a process of induction

Joseph Kucher Puerperal Convalescence and the Diseases of the Puerperal Period 1886 p 208

[3] Pitha Billroth s Chirurgie —Erysipelas

[4] On the alleged occasional prevalence of puerperal pyæmia and of erysipelas Edinburgh Med Journal 1876

[5] Archiv f Gynaek Bd xiii p 409

once in every 120 cases with fever He has demonstrated its sporadic occurrence

The discovery of the streptococcus of erysipelas, at a comparatively recent date, by Fehleisen, constitutes by far the most important event in the history of the development of the subject Gusserow[6] holds that erysipelas and puerperal sepsis have nothing in common He cites two cases of erysipelas, occurring during the latter half of pregnancy, as a purely accidental complication The puerperium, in the first case was normal The patient, in the second case, died a few moments after delivery The autopsy (v Recklinghausen) demonstrated that there was no trace of puerperal sepsis—the uterus and adnexa, pelvic peritoneum and connective tissues being normal Lomer[7] refers to a case of *erysipelas faciei*, occurring in a woman, nearly at term Labor was probably precipitated by the elevation of temperature The body of the patient was not touched by any of the attendants, and the patient herself was obliged to cleanse the genital tract The conditions were as favorable as possible for the production of puerperal sepsis by erysipelas The puerperium was normal

Gusserow narrates the history of a case of *erysipelas faciei*, occurring on the fourth day of the puerperium The patient recovered, without a sign of puerperal sepsis A second case was that of a woman, attacked on the eighth day of the puerperium with erysipelas, proceeding from a fissured nipple, who died seven days later The autopsy revealed absolutely no trace of puerperal sepsis All of these cases were evidently accidental complications of pregnancy and the puerperium, and they did not cause puerperal sepsis This fact, however, does not demonstrate that erysipelas cannot cause puerperal sepsis As remarked by Dr MacLaren, "The clinical fact that a puerperal woman may have a localized erysipelas of the skin in some part of the body, and not have puerperal fever, is no proof that erysipelas cannot cause puerperal fever" In the paper mentioned, Gusserow cites nine cases of erysipelas, occurring in women who were already the subjects of puerperal sepsis The clinical histories of these cases resemble in a general way those of the cases reported by Hugenberger In these cases, of course, it is not possible to assume any causal relation between erysipelas and puerperal sepsis Neither is it possible to conclude from these data that erysipelas cannot cause puerperal sepsis, or that erysipelas may not be a sequela of puerperal sepsis

[6] Archiv f Gynaek Bd xxv, Hft 2, p 169
[7] Zeitschr f Geburts u Gynaek Bd x Hft 2, p 384

Gusserow has sought to demonstrate experimentally that erysipelas has nothing in common with puerperal sepsis He inoculated six rabbits with pure cultures of the streptococcus of Fehleisen, in two animals, a small quantity of the fungus was placed free in the peritoneal cavity, in two, in contact with the wounded peritoneum, in two, in the subserous connective tissue Negative results were observed—absolutely no trace of sepsis upon post-mortem examination, some time after inoculation Control experiments—the injection of the micrococci into the skin of the ear, two rabbits—resulted in the typical development of erysipelas Winckel[8] concludes from the observation of 42 cases of puerperal erysipelas that "puerperal erysipelas occurs in a definite relation to, and in intimate union with, puerperal sepsis, and that the former, as the latter, is a genuine wound infectious disease, arising through local infection with the chain forming micrococcus, which can be inoculated alone or in connection with other micrococci"

Evidence, collected from clinical observation, pathological investigation, and experimental research, is totally inadequate, at the present time, to demonstrate the nature of the relation between erysipelas and sepsis in general—puerperal sepsis in particular In the midst of this confusion of ideas, and in this conflict of opinion, it is wisest to assume that the nature of the relation is necessary and causal Fortunately, however, the question exercises slight influence upon practice, since the adequate disinfection, instituted against known sources of infection, involves protection against erysipelas

NEW YORK BUREAU OF INFORMATION AND THE MEDICAL CONGRESS

To afford all possible aid to those coming from foreign countries to attend the International Medical Congress to assemble in Washington Sept 5, a Bureau of Information has been formed in New York, composed of twelve or fifteen leading physicians, among whom are Dr Wm M Smith, Health Officer, Dr Joseph O'Dwyer, Dr J Lewis Smith, of New York, and Dr Wm H Pancoast, of Philadelphia The following circular in English, French and German has been sent to the European medical journals and is to be placed on all the incoming steamers until the time for the Congress to be in session The circular is as follows

"The 9th International Medical Congress will convene in Washington, on Monday, September 5th

[8] Ueber das puerperale Erysipel, Munchen, 1885 Jos Ant Finsterlin, p 25

Washington is 200 miles from New York, six hours by railroad

"Foreign Steamers to New York land at New York or at Jersey City or Hoboken, opposite New York The New York Bureau of Information have engaged a reception parlor in the Hoffman house, corner of Broadway and 25th Street The Broadway car line, which is crossed by the car lines from the steamer landings, passes in front of the hotel

"Rooms at the Hoffman House, which is conducted on the European plan, can be obtained through the committee at a reduction of 25 per cent One or more of the Reception Committee will be in attendance between 2 P M and 4 P M each day, on and after August 20th At other hours the Clerk of the Hotel will act for the Committee Members intending to attend the Congress are requested to send their names in advance to the Reception Committee, Hoffman House, New York, so that the Committee can secure for them reduced hotel and railroad rates "

AMERICAN MEDICAL ASSOCIATION —We are informed by the Chairman of the Special Committee having the matter in charge, that on account of impaired health and professional duties Dr R Beverly Cole, of California, has been constrained to decline the appointment to give the Address on General Medicine at the next Annual Meeting of the Association to be held in Cincinnati, May 1888, and the committee have secured a promise that the address will be delivered by Prof Roberts Bartholow, of Philadelphia This selection will give very general satisfaction, as it secures the services of one of the ablest exponents of Practical Medicine in our country

RATES TO THE CONGRESS —*Caution* —Let all our readers who are interested in the railroad charges for those intending to attend the International Medical Congress to convene in Washington September 5, 1887, examine carefully the official statements over the signature of the Chairman of the Transportation Committee, J W H Lovejoy, M D , No 900 Twelfth St , Washington, D C , to be found in THE JOURNAL of July 23, p 126, and of August 13, pp 223–4, that they make no mistake by not complying with the terms for securing return tickets at one third the ordinary rates

ENTERTAINMENTS CONNECTED WITH THE NINTH INTERNATIONAL MEDICAL CONGRESS —We are authorized to state that the more important entertainments, receptions, and excursions positively provided for and adopted in the Programme are as follows Monday evening, Conversazione at U S Pension Hall, from 8 to 11 P M , Tuesday evening, Visit to the Corcoran Art Gallery, Wednesday evening, Receptions by the Citizens of Washington, from 8 to 12 P M , Thursday evening, General Reception and Buffet Banquet at U S Pension Hall, from 8 to 11 P M , Saturday afternoon, Visit to Mt Vernon, and, finally, a magnificent Excursion to the Falls of Niagara, for the foreign members of the Congress and their ladies The exact time of starting from Washington and other details of this excursion will be given in due time

SUDDEN DEATH OF DR WM A BYRD —Dr William A Byrd, of Quincy, Ill , died on August 14, 1887, at Slater, Mo , to which place he had gone for a visit to his father He is reported to have been attacked with sunstroke on the 13th, and survived only about eighteen hours He was 44 years of age, and one of the most active and well known surgeons in that section of the State

VACANCY IN THE ILLINOIS STATE BOARD OF HEALTH FILLED —Governor Oglesby has appointed Dr H V Ferrell, of Williamson county, a member of the State Board of Health, to fill the vacancy occasioned by the resignation of Dr Geo N Kreider, of Springfield

SOCIETY PROCEEDINGS

AMERICAN OPHTHALMOLOGICAL SOCIETY

Twenty third Annual Meeting, held in New London, Conn , July 20 and 21, 1887

(*Concluded from page 217*)

DR CHARLES A OLIVER, of Philadelphia, read a paper on

THE EYE OF THE ADULT IMBECILE

The following conclusions were offered

1 The eye of the male adult imbecile is an organ which is capable of proper functional activity

2 By reason of early mental incapacity, the ordinary appearances seen in the used eyes of the mentally healthy are lessened in due proportion to the amount of work given to the organ

3 The eye of the imbecile, being practically an unused organ for close and careful near work, the distension of the globe and the elongation in its visual axis with consequent increase in index of refraction is almost intirely avoided, this being in direct ratio to use

4 The want of these physical changes may be

considered as significant of a type of unused, healthy adult human eyes

5 The healthy eye of the imbecile serves to teach us that the various conditions seen in the used eye of the mentally healthy must be considered as pathological changes, the representatives not only of general want of tone but of constant and frequent abuse of a delicate organ

DR S D RISLEY, of Philadelphia, reported

ADDITIONAL CASES OF HYPERMETROPIC REFRACTION PASSING INTO MYOPIA

Thirteen carefully studied cases in which the eyes with hypermetropic refraction had been observed to pass into myopia had been recorded in the annals of the Society To day the author brought forward nine additional cases, making a total of twenty two In all these cases, the state of the refraction had been repeatedly demonstrated under complete paralysis of the accomodation In every case there was well-marked retino-choroidal irritation with asthenopia Insufficiency of the internal rectus was noted in three cases, in all of which tenotomy of external rectus was performed In no case was emmetropic refraction observed at any stage of the progress The condition seemed to pass from the shallow hypermetropic ball to the lengthened myopic eye by the turn-stile of astigmation The most important measure in the treatment of these cases was considered to be the use of correcting glasses When we consider the large number of cases which at the first present the same conditions as the cases reported and who have subsequently had no return of the trouble, we cannot but think that the group of cases now presented are only those in which the treatment has failed, and that without their correcting glasses a much larger number would have pursued the same history A study of these cases has demonstrated to the author the importance of astigmatism when present in very low degree, as a factor in setting up those changes in the nutrition of the eyeball, which result in impaired resistance to even normal intraocular tension

DR SAMUEL THEOBALD read a paper on

THE PATHOGENESIS OF PTERYGIUM

The generally accepted theory of Arlt that pterygium has its origin in a marginal corneal ulcer to which a tag of conjunctiva has become attached, he thought was untenable, because if this were its usual mode of origin, pterygium would be found approaching the cornea from every possible direction, since marginal corneal ulcers are not apparently more frequent in one position than in another It is known, however, that such is not the case, but that pterygium is almost always situated directly over the recti muscles and that in a very large proportion of cases it is over the rectus internus The more recently proposed theory of Poncet that pterygium is due to the presence of microbes which tunnel their way under the corneal epitherium is open to the same objection, for this also assumes the existence of a precedent corneal ulcer The view long held that conditions which tend to induce chronic hyperæmia of the conjunctiva favor the formation of pterygium, he thought was well established Assuming that this view is correct are there reasons why localized hyperæmia of the conjunctiva should be of frequent occurrence where pterygium usually forms to the nasal side of the cornea? This was answered affirmatively The close connection between the vessels of the recti muscles and those of the anterior portion of the conjunctiva was referred to, and it was pointed out that the determination of blood to these muscles might influence the blood supply of the overlying conjunctiva, and that this would be the case especially with the recti interni since they were the largest of the straight muscles, and in close relationship with conjunctiva because attached to the sclerotic nearer to the cornea border than any of the others Abnormality in the distribution of the blood supply of the internal recti muscles and of the overlying conjunctiva, and more frequently still, disturbance in the normal relationship between convergence and accomodation, such as insufficiency of the internal recti muscles, the different varieties of ametropia These were regarded as the usual causes of pterygium through the localized hyperæmia of the conjunctiva to which they give rise

DR THEOBALD also read a paper on

RECURRENT RETINAL HÆMORRHAGES FOLLOWED BY THE OUTGROWTH OF NUMEROUS SMALL BLOOD VESSELS FROM THE OPTIC DISC

The case reported was that of a lady, 52 years of age, in whom menstruation had recently ceased During a period of nine months she had suffered with recurrent hæmorrhages into the retina and the posterior part of the vitreous humor of one eye The macula escaped serious involvement, and central vision was but little affected The hæmorrhages were supposed to be due to thrombosis of one of the larger retinal veins Finally, a nebulous outgrowth from the optic disc, extending forward into the vitreous humor for some distance made its appearance This consisted of numerous small and nearly parallel blood vessels running from behind forwards and held together by semi opaque tissue, the outline of which could be easily distinguished from the surrounding vitreous When last seen this growth had diminished somewhat in size The prognosis was regarded as regarded as favorable, the development of new vessels being looked upon as an effort of nature to repair the damage caused by the repeated hæmorrhages

DR O F WADSWORTH, of Boston I have seen several cases of recurrent hæmorrhage partly retinal but largely into the vitreous In only one could I positively say that there was a development of vessels into the vitreous The other cases have not been observed sufficiently long to show whether or not there has been a development of vessels The case referred to was that of a man seen ten years ago when he was 35 years of age When I saw him there was extensive hæmorrhage into the vitreous of one eye rendering the fundus invisible This cleared up to a certain extent leaving portions of the retina clear Then certain changes in vessels toward the periphery could be seen The other eye showed a perfectly healthy fundus except in certain places

toward the equator, where there were several patches of peri vasculitis The hæmorrhages continued to occur in the affected eye After a time there could be detected in the vitreous a nearly transparent membrane containing vessels, some of which could be traced back to the retinal vessels Two or three years later, I again saw the patient He had then been free from recurrences for a year or two There were still some vessels in the vitreous, but not so many as previously

Dr H Knapp I wish to say a word with reference to treatment The main point is not to fatigue the eyes, and to put them at rest early in the evening A waitress in a New York family suffered from hæmorrhages every time the family gave an evening party She was sent to the country and the hæmorrhages cleared up She returned and served at an evening party and again the eye filled with blood She has now given up service and for two or three months has had no trouble The treatment consists in rest, and in avoidance of everything that would produce a dropsical condition of the blood

Dr G C Harlan, of Philadelphia, reported a case of:

EMBOLUS OF THE CENTRAL RETINAL ARTERY

The patient was a clerk, 52 years of age, in good general health While reading in perfect comfort, a shadow suddenly appeared before the left eye and on closing the other, he could just distinguish large objects about the room, and in a few minutes sight was entirely gone An ophthalmoscopic examination made the next morning, showed an extensive œdema of the retina, giving the whole fundus a grayish tinge, disc pale and its margins blurred, arteries very pale, although not much narrowed, and some of the smaller branches lost in the retinal œdema, larger veins contracted in places, particularly in and near the disc, but generally of full calibre, phenomenon of visible, slow continuous circulation of blood in bead like sections well marked in superior temporal artery and vein, macula occupied by bright red patch, oval in form with its long diameter horizontal, and several minute terminal vessels in its neighborhood enlarged and apparently isolated, two small dots of retinal hæmorrhage at outer margin of disc The œdema increased decidedly for the first few days, and then gradually subsided There was still a little remaining on the 19th day, after which the patient was not seen for three weeks, when the color of the fundus was normal The visible circulation lasted only about a day and a half, disappearing first in the artery The veins refilled at their narrowed portions, and retained nearly their full calibre, while the arteries became paler and narrower until only the two main trunks could be seen and these showed white lines along their margins from perivasculitis The spot at the macula gradually disappeared The disc regained the distinctness of its outlines but remained dead white

Dr David Coggin, of Salem, Mass, read a paper entitled *Chronic Glaucoma*

Dr George C Harlan read a paper on

DANGER TO IRON WORKERS FROM THE USE OF OLD HAMMERS

A hammer was shown from which a fragment had split off, injuring the eye of a workman The constant concussion of the hammer causes it to assume a chrystaline condition and become very brittle

Dr Myles Standish, of Boston, reported a case of

RETINITIS PIGMENTOSA TREATED ELECTRICALLY

The patient was a woman 33 years of age, and was myopic—15o D She had worn glasses since she was 17 years of age When first seen, April 14, 1886, her sight had been failing for three years and for the last three months had failed very rapidly, so that she could not go on the street alone after dark On ophthalmoscopic examination characteristic patches of retinitis pigmentosa were found in the periphery of the fundus of each eye Her vision was R E $\frac{2}{40}$, L E $\frac{2}{30}$, and the fields of vision were limited to less than 20° in the vertical and horizontal axes The only treatment has been the use of constant current, of such strength as could easily be borne This has been applied once in five days during the last fifteen months Her present vision is right $\frac{2}{30}$, left $\frac{2}{25}$, and the fields of vision have now vertical and horizontal axes of 70° She now goes on the streets after dark with safety

Dr C H Williams, of Boston, read a paper on

ASEPTIC CATARACT EXTRACTION WITH IRRIGATION

The author reported five cases of irrigation of the anterior chamber after cataract extraction with a 5 per cent solution of chloride of sodium, as recommended by Dr McKeown Instead of a syringe, a glass tube was used, bearing two glass tubes blown in the side One of these was drawn out to a fine nozzle that could be easily inserted into the anterior chamber, the other had a rubber tube and mouth piece attached so that the pressure of the stream could be controlled by the operator The flask had a capacity of 50 cc, more than enough to complete any irrigation without removing the tube from the eye The irrigating instruments and the 2 per cent solution of cocaine were sterilized in the steam sterilizer, and this was not found to injure the anæsthetic properties of the cocaine The other instruments and the dressings were sterilized by dry heat at a temperature of 150° C In order to determine the efficacy of the solution of the bimiodide of mercury used for the preliminary washing out of the conjunctival sac, some experiments with plates cultures were made at the laboratory of the Harvard Medical School, through the kindness of Dr Ernst An equal amount of the bimiodide of mercury and the iodide of potassium were dissolved in water and added to 10 per cent nutrient gelatine, to give a series of strengths up to 1 to 5000 of the bimiodide to the gelatine Ten days after exposure to the air of the laboratory for six and one half hours no growth of bacteria were found on any of the plates, although on the unprotected plates, exposed at the same time, there was abundant development of colonies of bacteria Gelatine of the strength of Pana's solution (1–20 000) was then tried, and these plates

after four day's showed an average of 1 5 and 0 8 colonies of bacteria to the square centimetre of surface in the two series of plates, while on the unprotected plates the average was 10 5 For two of the cases of extraction a suture was passed through the piece of conjunctera above, and this held the wound well in apposition All of the extractions were done without iridectomy, and a layer of iodoform was dusted on the edge of the closed lids just before applying the bandage

DR O F WADWORTH, reported a case of

CONGENITAL ZONULAR GRAYISH-WHITE OPACITY AROUND THE FOVEA

The patient was a child 11 months old She was unable to sit or stand, and could not hold anything in her hands She appeared to take little notice of anything Externally the eyes were normal With the ophthalmoscope the discs did not seem to vary from the normal appearance The macula was dark red and surrounded by a grayish white opacity The remainder of the fundus appeared to be normal There appeared to be some light perception Five months later there seemed to be no perception of light The disc was sharply defined, the central vessel small The mother had had four healthy children The fifth according to the history, had been sick in a similar way as the one under consideration In all the reported cases some weakness of the general muscles was noted

DR WADWORTH also reported a case of

SEPARATION OF THE RETINA IN BOTH EYES WITH ALBUMINARIA OF PREGNANCY,—REPLACEMENT

The patient was a married woman 7½ months pregnant About the beginning of the eighth month œdema of the eye lid appeared This was soon followed by indistinctness of vision The urine was loaded with albumin, and contained hyaline and granular casts When seen by the speaker, there was a general separation of the retina in the right eye In the left eye there was also separation of the retina but not so distinct After consultation, it was decided to induce premature labor This was done and a living child was delivered Before the completion of labor a convulsion occurred for which bleeding was resorted to The patient convalesced and vision gradually returned When last seen, the discs were clearer No separation could be made out in either eye

Dr B Alexander Randall read a paper describing a case of *Coloboma of the Optic Nerve*

Dr F Buller, of Montreal, Can , read a paper describing *a Peculiar Form of Granular Conjunctivitis associated with Ichthyosis* Two cases in which this combination was present were reported

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AFTERNOON SESSION

Dr W S Dennett, of New York, exhibited an *Ophthalmoscope in which the Mirror was substituted by an Electric Light*

Dr Lucien Howe presented a small *Pocket Ophthalmoscope with Movable Disk* Dr Howe also exhibited several *Photographs of the Interior of the Human Eye*

DR EDWARD JACKSON, of Philadelphia, presented a set of

SMALL TEST LENSES, WITH A MODIFIED TRIAL FRAME.

The lenses are one inch in diameter and the saving in weight is from one third to three fourths of the weight of those in common use The lenses are plano convex and concave, giving advantages over the double convex and concave, by lessening spherical aberration, being easier to combine together and making it possible to neutralize more perfectly spectacle glasses the strength of which it is desired to test Several lenses had been added to the series usually placed in such sets, including stronger concave sphericals and two astigmatic lenses, which had been found very convenient in testing for astigmatism It was suggested that all intermediate lenses added to the metric series should be made to divide in half the present interval of one fourth dioptry, making the interval one eighth and preserving the simplicity of the system Making the lenses smaller allows the trial frame to be made smaller, and very much lighter, so that the new frame with the new lenses weighs less than half the old frames with lenses of equal strength The temple of the frame is attached to the lower part of the lens holder, allowing the lenses to be placed in the back groove of the holder or withdrawn therefrom through the natural depression of the temple instead of across to prominence of the brow or cheek The set and frames are made by Queen & Co , of Philadelphia

Dr S D Risley, of Philadelphia, described an *Ophthalmoscope with Cylindrical Lens*

DR SWAN M BURNETT, of Washington, described a

MODIFICATION OF THE REFRACTION OPHTHALMOSCOPE WITH AN ATTACHMENT FOR USING CYLINDRICAL GLASSES

The modifications of the ophthalmoscope which were offered by the speaker consisted *first*, in a clip behind the instrument into which the cylinders in the test cases can be inserted The inclination of the axis is read on a graduation on the back of the mirror The author had found the arrangement satisfactory in verifying the diagnosis of astigmatism made by other methods, and for examining the fundus of the astigmatic eye free from its anomalous refraction , *secondly*, the superposed disks containing lenses which singly and by combination give 47 numbers [22 plus and 25 minus lenses] with a regular interval of 0 5 D up to 10 5 plus and minus, *thirdly*, a plane circular mirror with a concave tilting mirror swung in front of it The plane mirror does not interfere with the tilting mirror when in use, and when it is desired to use the plane mirror alone the tilting mirror can be detached from its upper bearing and swung downwards out of way on its lowest bearing The instrument is very light It is made by Queen & Co , Philadelphia, and its cost is about $20

DR JOHN GREEN, of St Louis, reported a case of

MYOPIA FOLLOWING IRITIS

In 1867, the speaker had been the subject of iritis

involving both eyes During convalescence, he noticed that the dimness of vision was not wholly due to lack of transparency of the media, and that vision was improved by the use of concave glasses He had occasionally observed in other patients with iritis that as they recovered vision was benefited by the use of concave glasses Last April the speaker had iritis affecting the left eye He was then able to compare the one eye with the other, and found that the myopia induced by the iritis amounted to 1 50 D This gradually diminished until it disappeared at the end of four weeks leaving the normal refraction He had been unable to find accounts of myopia as a transient symptom during convalescence from iritis

EXECUTIVE SESSION

The report of the Committe on a *Congress of American Physicians and Surgeons* was received, and the following resolution adopted

Resolved, That the American Ophthomological Society appoint a representative, and alternate, to the proposed Executive Committee of Arrangements for the Congress of special Societies, with the proviso that in making the appointment this Society does not commit itself to an approval of the present sketch in all its details

Dr Wm F Norris, of Philadelphia, was elected Representative to the Executive Committee of the Congress, and Dr D B St John Roosa, of New York, was elected alternate

OFFICERS FOR ENSUING YEAR

President—Dr William F Norris, of Philadelphia.
Vice-President—Dr Hasket Derby, of Boston
Secretary and Treasurer—Dr O F Wadsworth, of Boston
Corresponding Secretary—Dr J S Prout, of Brooklyn

The following were elected to membership
Dr George Cutter, of Brooklyn, Dr D C Cocks, of New York, Dr H S Oppenheimer, of New York, Dr Charles McIlvaine, of Trenton, and Dr Daniel De Beck, of Cincinnati

The next meeting of the Association will be held at New London, Conn , on the third Wednesday of July, 1888

FOREIGN CORRESPONDENCE

PRAGUE [1]

Gussenbauer, his Methods—Enlargement of Cervical Glands—Tuberculosis of the Cheek—Fistulæ from Osteo-Myelitis of Femur—Litholapaxy—Genu Valgum—Resection of Intestine for Gangrene—Chiari his Work and Laborotory—Unique Skull

Dear Dr Fenger —I arrived in Prague April 26, and at once sought Prof Gussenbauer, who impressed me very favorably He is about 44 years of age, and blessed with a vigorous, healthy constitution His aspect and behavior indicate that he is a hard worker He has charge of the surgical wards in the Stadtkrankenhaus, which contains 120 beds and affords a rich material for clinical teaching Hardly a day passes but he performs two or more capital operations He is a good lecturer and a splendid teacher In his Klinik, when a case is shown, one of the assistants reads a short history, which is followed by brief remarks with special reference to a correct diagnosis by Gussenbauer After all the material for the day has been presented the operations begin The antiseptic solution for irrigation is a 1 1,000 solution of corrosive sublimate, and a 4 per cent solution of carbolic acid for the instruments As a dressing for wounds a small compress of sublimated gauze is used, over which a copious dressing of dry aseptic hygroscopic gauze is applied, and the whole is covered with a cheap impermeable rubber cloth I can only give you a very brief account of what I saw during my three days with Gussenbauer

The first case was one of enlargement of the cervical glands on one side in a woman 40 years of age The history showed that when she was a girl a few of the submaxillaries became swollen, and remained in this condition stationary for twenty years Two years ago the same glands increased in size, and additional glands in the direction of the lymph current became involved It was assumed that the primary enlargement was a simple hyperplasia, and that the recent progress was due to tubercular infection, in other words, the hyperplastic glands had furnished the soil for localization of the tubercle bacillus The removal of the glands made a deep and very careful dissection necessary, as some of them were in close contact with the large vessels of the neck The internal jugular vein was laid bare for three inches Wherever it was deemed necessary the division of parts was made between compression forceps

The second case was one of tuberculosis of the cheek in a man 50 years of age The swelling had ulcerated externally, and where the skin had given way the surface was covered with flabby granulations The mucous membrane of the mouth was closely attached to the swelling The whole mass was rapidly excised, hæmorrhage carefully arrested and mucous membrane sutured, while the external large defect was covered with a flap taken from behind the ear

The third case was that of a boy who had suffered from an acute attack of osteo myelitis of the lower end of the femur several years ago, and who now had numerous fistulous openings leading to the primary location of the disease Numerous incisions were made down to the bone, but no central reservoir could be located, and the whole lower end of the femur appeared to be covered with fungous granulations which contained a number of small spiculæ of bone The granulations were carefully removed with a sharp spoon, and the different cavities were drained and some of them packed with iodoform gauze

The fourth case was one of litholapaxy in an old man who had been relieved and apparently cured by the same operator on two previous occasions On measurement it was found that the stone measured 3 cm Chloroform was administered, and the instrument for crushing was introduced four times, and each time a number of seizures were made and the evacuator removed a large mass of detritus After

[1] By permission of Drs Fenger and Senn

the last crushing and evacuation the interior of the bladder was carefully explored, and no fragments could be detected Towards the last a small lithotrite was used for seizing and crushing of small fragments The whole operation lasted nearly an hour

The fifth case was a genu valgum I had seen so many cases of osteotomy for this deformity that I was very anxious to witness a bloodless procedure for the correction of the false position Professor Gussenbauer has for a long time abandoned the cutting operation, and substituted for it the simple *redressement* He showed me several dozen of photographs taken before and after treatment, and the final results certainly compare favorably with those obtained by osteotomy The advantages of this treatment consist in an absolute safety against infection, and in requiring less time on part of the patient After the patient is fully anesthetized he is placed on his side, and the surgeon puts the limb upon his right shoulder in such a position that the convexity at the knee is directed upwards With both of his hands he makes forcible interrupted pressure over the knee, and if his force is not adequate to correct the deformity one or more assistants help to increase the force The straightening is gradually accomplished, and often attended by an audible noise caused by the rupture of ligamentous structures The whole object of the operation must be accomplished at one sitting, and the proper axis of the limb must be completely restored In the case I saw the deformity was considerable, and the patient otherwise a healthy young man It required the combined efforts of the operator and his assistants to properly straighten the limb After the operation the limb is at once secured in a plaster-of Paris splint After three weeks an interrupted plaster splint is applied, with hinge joints on each side, and the patient is allowed to walk without the aid of crutches, Gussenbauer has never observed any unfavorable results after this procedure, and in ordinary cases confidently expects a favorable result The patients are required to wear a lateral support for at least six months in order to prevent a recurrence of the deformity I am satisfied that, in the milder forms of genu valgum and varum, this treatment is more applicable than osteotomy, and should always be tried before resorting to the more serious measure of causing a fracture

Prof Gussenbauer is justly proud of a case which he has now in the hospital in which resection of the intestine for gangrene resulting from strangulation was successfully performed The abdominal wound is healed, the bowels move regularly and the patient can be considered entirely out of danger Such a result must be a great satisfaction to the surgeon, and encourage him in the future to resort to desperate measures in desperate cases

I had the pleasure of meeting the distinguished professor of pathology, H Chiari, at the house of Professor Gussenbauer, where we spent several interesting hours around the dinner table The next morning I witnessed an autopsy at the Children's Hospital and had an opportunity to see and hear how accurately the work is done Prof Chiari also showed me through the splendid laboratory and demonstrated many interesting specimens in the museum Although a comparatively young man, Chiari stands in the front rank of German pathologists and the profession may confidently expect that through his energy and enthusiasm many new discoveries will be made I also examined the splendid anatomical collection under the guidance of Dr Rex, prosector of anatomy This collection contains a unique skull The cranial bones throughout are at least an inch thickness, perfectly solid, and the skull is so heavy that it seems to be composed more of stone than bone N SENN

LETTER FROM LONDON

(FROM OUR OWN CORRESPONDENT)

Alvelos in Epithelioma—Physiological Effects of Massage—Duration of Life—Borax and Boracic Acid as Food Preservers and Antiseptics

Several cases of epithelioma of the face and lips are claimed to have been cured with the juice of alvelos, a plant belonging to the family of the Euphorbiaceæ It is said to act as an irritant and to destroy the diseased tissue, which was in each case quickly replaced by healthy granulations of the different kinds of alvelos, male, female and wild, the second is considered to be the most efficacious in this respect The best results are obtained with the juice in a concentrated or solid form, like an extract, and with the addition of vaseline or tanoline This preparation is applied with a brush to the affected part (previously washed with a two per cent solution of carbolic acid), which is then left exposed to the air for at least one hour It is afterwards covered with lint The treatment is repeated every two or three days, but never more than once in the course of twenty four hours, as the pain is very severe The treatment is more speedily successful when begun before ulceration has set in

Dr Eccles has recently given some interesting observations on the physiological effects of massage Four distinct manipulations were described, and their immediate effects on the human tissues and functions as observed by Dr Eccles in a series of experiments on healthy persons noted *Effleurage* stimulated the skin muscles, produced dilatation of the superficial tissues and insensible perspiration, excited the skin reflexes, and, acting through the cutaneous nerves, increased the rapidity of the circulation and heart's beat *Petrissage* forced the lymph out of the muscles, increased the velocity of the blood current through the part temporarily decreased the size of a limb, and increased its muscular power The pulse rate was reduced, especially in abdominal kneading *Massage* and *friction* produced the same local effects as petrissage and was peculiarly applicable to joints *Tapötement* excited muscular contractions The immediate and remote effects of massage as a combination of the above named manipulations were, that the texture of the skin was improved, the sense of locality was increased, the general body temperature was raised, and the free surface temperature of a part under

massage become higher than that of the rest of the body while abdominal massage decreased the surface temperature of the extremities A course of mas sage of one month's duration increased the body weight, the appetite, muscles, strength and ability to sleep and work well

Dr W Playfair is a strong advocate of massage as a form of treatment He was one of the first to intro duce massage prominently into notice in England as an agent along with over feeding, and freedom from previous surroundings in the treatment of profound cases of neurasthenia or malnutrition, whose exact character we did not as yet thoroughly understand Some of the cases which were commonly counted as incurable and were a curse to their families could, he thinks, really be cured by these means He is in different what terms are used, but underlying mere criticism of the language there is apt to be a sneer at the treatment The increase in weight in healthy men was remarkable In severe cases of illness under his treatment, he is accustomed to see an in crease of ten pounds or twelve pounds a week, and many patients ultimately double their weight He has seen this treatment wrongly used in cases of locomotor ataxy and disseminated sclerosis, owing to his mistaken diagnosis and he is anxious not to run a hobby too hard, so that he has only used mas sage in a few uterine cases with a view to replace exercise Dr Powell has published a remarkable case of a lady whom he had found, as he had thought, moribund, with the right lung riddled with cavities, a hectic temperature and profuse night sweats There was abundant expectoration, in which eminent bac teriologists could find no bacteria He declined to attempt any treatment, and it was only after urgent pressure against his own wish that he did so The results turned out to be the most remarkable he had seen, the cough stopped, the patient rapidly im proved, and in two months and a half gained six stone and her lungs were practically recovered Over feeding he considers only possible when there was massage to take away the waste Dr Playfair protests strongly against the doctrine that the art of massage is a very difficult one and takes two years to learn In his opinion, half a dozen lessons are quite enough, and any nurse who could not learn all that is wanted in that time was never likely to make herself useful at it

According to Mr Edwin Chadwick the mean du ration of life during the reign of Queen Victoria has advanced from 30 to 38 years The services of paid union officers save the country £3,000,000 an nually In France the death rate is 3 per cent higher than in England, which means the loss of 112,000 lives more than at present in England In Germany with a mortality in its army the lowest in Europe, the death rate of the civil population is 6, in Italy 8, and in Austria 11 per thousand higher than here, which means in Germany a sacri fice of 135,000 lives yearly more than in England and in the two last countries of 624,000 lives annu ally over and above the corresponding waste of life in England and Wales

The extensive use of borax and boracic acid as antiseptics, especially for the preserving of fish brought from the northern European fishing grounds to English ports, has just given rise to some special observations upon this subject, which are most interesting Boracic acid has been given to several pa tients and then the turmeric test, which will detect one part in 2000 has been used, the spectro-electric tube of the French pharmacist, Vigier, has also been used In twelve cases in which the doses varied from twenty to fifty grains daily, toxic symptoms were observed after the largest doses had been taken, there was headache, vomiting and a feeling of ma laise In one instance after the use of borax for ten days, a slight acceleration of the pulse rate was ob served accompanied by increase of temperature, loss of appetite, redness of fauces, and bronchial catarrh, finally there was a well marked papular eruption upon the thighs and joints The urine commonly gave the reaction for borax ten minutes after the dose was taken, but it was not found in two days after the drug had been used by inunction In other cases it persisted in the urine for six, eight or fourteen days after the patient took it Boracic acid was found to have a decided diuretic effect, albumin disappeared from the morning urine in some cases where albuminuria existed When the greatest diuresis was produced, the boracic acid itself disappeared Borax was also found in the perspiration, saliva and fæces several days after in gestion The observations do not tend to show the danger of the use of boracic acid and its com pounds G O M

BRITISH MEDICAL ASSOCIATION

(FROM OUR SPECIAL CORRESPONDENT)

The Meeting in Dublin

One of the most successful meetings of this great Association has just been concluded, and the whole medical world has had representatives here to taste the genuine Irish hospitality, and enjoy meeting and communing with the eminent members of the pro fession here assembled The number of members registered as being in attendance amounted to 904 The weather was most propitious, and Dublin was in holiday attire

The president, Dr Banks, delivered his address in the large Dining Hall of Trinity College, taking for his subject, *The History of Medicine in Dublin*, which he handled in a most complete and interesting man ner He spoke of the admission of women to the University as being obligatory, as the charter of the University is mandatory as written, and the Colleges of Physicians and Surgeons have thrown open their doors and afforded them every possible facility

The various sections were held in Trinity College and were well attended Many papers of great merit by noted members of the profession were read and discussed, but can not be mentioned here

The address on Medicine was delivered by W T Gairdner, M D , LL D , Edinb , Physician in Ordi nary to Her Majesty the Queen in Scotland, Pro fessor of Medicine in the University of Glasgow

His subject was, "*Has the Art of Medicine Advanced during the Present Century?*" In an able manner he reviewed the progress and history of medicine from the time of Hippocrates up to the present As a proof of the greater stability of medical science in our day Dr Gairdner adduced, namely, (1) The progress of preventive medicine (2) The disappearance of orthodoxy (3) The cessation of the abuse of alcoholic stimulation in disease The paper though quite long was listened to with marked attention and was well received

The address in Surgery was delivered by Edward Hamilton M D, F R C S I, Prof of Surgery in the Royal College of Surgeons of Ireland, on, "*Tissue Resistance and Antisepticism*" The whole of this able paper would have to be given in order to appreciate its important and valuable contents, which is impossible now

The address in Public Medicine was given by the Rev Samuel Haughton, M D, Senior Fellow, Trinity College, Dublin, on, "*Reflections on Death rate, with Special Reference to Dublin and its Suburbs*" This was the most spicy and entertaining address delivered during the meeting The solid important facts were frequently interspersed with the best Irish wit The death rate of Dublin is very high, ranging from 22 33 in July to 37 13 in March per 1000 This is owing to the great number of poor people who are crowded together in certain districts Dr Haughton showed that a change in temperature from 50° to 32° increased the death rate from 35 4 to 44 3 per 1,000 "What this means no one can tell better than the clergy and physicians, who know the sufferings of the Dublin poor in winter The real cause of the high death rate in Dublin is the poverty of a large proportion of its inhabitants, which arises from causes quite beyond the control of the sanitary authorities How much of this poverty is due to political causes, and how much to the people themselves is no business of mine to discuss It is there and produces its deadly effects However, we must not despair, but by repeated efforts on the part of all, do what we can to relieve the sufferings of the poor, and remove their causes I would ask my Dublin friends always to keep in mind the answer of Simon Peter to the Divine Lord 'Master we have toiled all the night and taken nothing, nevertheless at Thy word I will let down the net'"

The social programme of the meeting was a prominent feature The *soiree* given by the President of the Association and the Dublin Branch at the Royal University of Ireland on Wednesday evening was a brilliant gathering attended by 3,000 people

Thursday morning a Breakfast was given to the members of the Association by the Irish Branch of the British Temperance Association The Annual Dinner occurred in the evening at 7 o'clock at the Royal University, and was attended by the Lord Lieutenant of Ireland, escorted by a famous Highland regiment The Liverpool Band furnished the music

On Friday, from 4 to 6, a Garden Party was given in the Fellow's garden, Trinity College, by the President and the Dublin Branch

On Friday night a conversazione was given to the members by Surgeon General Hassard and Officers of the Medical Staff in the Museum of Science and Art

Saturday was devoted to excursions which visited the Dublin Bay, the Water Works, Glendalough and Avoca, and the Boyne

Thus came to an end one of the most successful meetings in the history of the Association

W H H

Dublin, Aug 6, 1887

INTERNATIONAL CONGRESS

SECTION IV —OBSTETRICS

The following papers are announced

1 The Pathology and Treatment of Tubal Pregnancy, Mr Lawson Tait, F R C S, Birmingham, England

2 Tubal Pregnancy, J Veit, M D, Berlin

3 Operative Interference in Early Extra-Uterine Pregnancy, Michael O'Hara, M D, Philadelphia

4 The Alleviation of Pain during Parturition Professor P Zweifel, M D, Erlangen

5 The Normal Forceps, Professor Lazarewitch, M D, St Petersburg

6 The Origin and Causes of Sterility in Women, Luigi Casati, M D, Forli, 24 Via Bufalini

7 Cæsarean Section, Professor Leopold, M D, Dresden

8 Conservative Cæsarean Section, M Sanger, M D, Leipsic

9 In the Cases of Cæsarean Section, in which Porro's Operation is not Indicated, what is the Best Manner of Suturing the Uterine Wound? Domenico Peruzzi, M D, Bologna, Via Mazzini 22, Italy

10 The Prognosis of the Cæsarean Section, Professor William T Lusk, M D, New York

11 Porro's Operation, Goelson Duncan, M D, London, England

12 Embryotomy or Cæsarean Section? Ginlio Kirch, M D, Rignano Sull' Arno, Italy

13 Craniotomy on the Living Fœtus, Robert B Dixon, M D, Boston, Mass

14 Abdominal Section for the Removal of the Fœtus, Professor W H Wathen, M D, Louisville, Kentucky

15 A Study of Laparo Elytrotomy, Alexander S Clark, M D, Paris

16 On the Relation of the Atmosphere to Puerperal Fever, Joseph Kucher, M D, New York, N Y

17 The Prophylaxis of Puerperal Fever, Professor Emil Ehrendorfer, M D, Innsbruck

18 A Study of certain Questions in connection with Puerperal Fever, with Particular Reference to the Use of the Intra-Uterine Douche and Curette, Professor Charles Warrington Earle, M D, Chicago, Ill

19 Antiseptic Midwifery from the Point of View of a Rural Practitioner, W H Sharp, M D, Volcano, W Va

20 The Prevention of Puerperal Peritonitis, R Lowrey Sibbet, M D, Carlisle, Pa

21 On the Prevention and Treatment of Puerperal Fever, Morse Madden, M D, Dublin

22 The Treatment of Miscarriage, E Pasquali, M D, Via Condotti 9, Rome

23 Conservative Obstetrics, with especial reference to the Treatment of Abortion and the Third Stage of Labor, Professor Rodney Glisan, M D, Portland, Ore

24 The Kidney of Pregnancy, and its Obstetrical Significance, Professor A L S Gusserow, M D, Berlin

25 The Causes and Modus of Sudden Death in Eclampsia and its Prevention, A S v Mansfelde, Ashland, Neb

26 Puerperal Eclampsia, Ira E Oatman, M D, Sacramento, Cal

27 The Pernicious Vomiting of Pregnancy, Jacob Price, M D, West Chester, Pa

28 Vicarious Menstruation, Duncan C MacCallum, M D, M R C S, Eng, Montreal

29 A Study of Deventer's Method of Delivery of the After coming Head, John Bartlett, M D, Chicago, Ill

30 On the Contracted Pelvis in America, Robert Herdegen, M D, Milwaukee, Wis

31 The Necessity of Accurate Diagnosis of the various Malformations found in the Pelvis, Professor Wm S Stewart, M D, Philadelphia, Pa

32 The Treatment of Posterior-Occipital Positions with Special Reference to Manual Rectification, J Algernon Temple, M D, M R C S, Eng, Toronto

33 Maternal Impressions Affecting the Fœtus, W T Taylor, M D, Philadelphia, Pa

34 The Influence of Leukæmia on Pregnancy, Illustrated by a Case, J C Cameron, M D, 41 Belmont Park, Montreal

35 Lithiasis in Pregnancy, J E Kelly, M D, 16 East 29th St, New York, N Y

36 The Causes of Left Occipito Anterior Positions in Vertex Presentations, J W Atwood, M D, Burlington, Vt

37 Internal Uterine Hæmorrhage, the Result of Over distension of the Uterus from Hydramnion, Professor Edward Hy Trenholm, M D, Montreal

38 Relation of the Membranes to the Process of Parturition, Henry T Byford, M D, Chicago

39 Delayed Involution, Prof W H Byford, M D, Chicago

40 Development of the Placenta, H O Marcy, M D, Boston, Mass

41 The Histology of Reproduction, Middleton Michel M D, Charleston, S C

42 Dystocia from Rigidity of the Cervix and its Management, George Wheeler Jones, M D, Danville, Ill

Papers will also be read by the following gentlemen

Prof Gustav Braun, M D, Vienna
Professor A Carpentier, M D, Paris
L Ch Boishinière, M D, St Louis, Mo
J F Y Paine, M D, New Orleans
J Johnson Alloway, Montreal
E P Sale, M D, Aberdeen, Miss
E J Doering M D, Chicago
J Amédéee Doléris, M D, Paris
A Cordes, M D, Geneva
Thos Menees, M D, Nashville, Tenn
Rodrigues Dos Santos, M D, Rio de Janeiro
D Lloyd Roberts, M D, Manchester, England

DeLaskie Miller, M D, *President*
2011 Prairie Ave, Chicago
W W Jaggard, M D,
2330 Indiana Ave, Chicago
Joseph Kucher, M D,
33 East 33d St, New York
Home Secretaries

SECTION VII, ON ANATOMY

The following is a list of papers proposed to be read in the Section on Anatomy

The Bladder, by Reginald Harrison, F R C S, etc, Liverpool, Eng

The Wolffian Bodies, by William Mitchell Banks, M D (Ed) F R C S, etc, Liverpool, Eng

A Paper (subject to be announced) by Prof E Frohmann, Jena, Germany

The Intercranial Nerve Tracts in the Light of Atrophy Methods of von Gudden, by E C Spitzka, M D, etc, New York

On the Development of the Torus Longitudinalis in Selosians and its Homology in Higher Vertebrates, by Prof Rabe Ruckard, M D, etc

On the Surgical Collateral Branch of each of the Main Arteries of the Human Body, by Edward Souchon, M D, New Orleans, La

A Contribution to the Pathology of Hip Disease, by Milton Josiah Roberts, M D, of New York

Anatomy of the Male Uretha and its relation to Stricture, by E R Palmer, M D, Louisville, Ky

Does a Relationship exist between Anomalies of the Visual Apparatus and the so called "Neuropathic Tendency," by A L Ranney, M D, New York

A Paper (subject to be announced) by Thomas G Morton, M D, Philadelphia, Pa

Compression Myelitis in Pott's Diseases, by George R Elliott, M D, New York

Anatomy of the Foot and its relation to the Operation of Tentomy, by Lewis Hall Sayre, M D, New York

Anatomy of the Bladder and its relation to Rupture, by I N Bloom, Louisville Ky

Dissection of a very Young Human Embryo, by Augustus C Bernays, St Louis, Mo

On the Urethra, by Reginald Harrison, F R C S, etc, Liverpool, Eng

Anatomy and Surgical Importance of the Renal Capsule and the Perirenal Adipose Tissue, by L H Dunning M D, etc, South Bend, Ind

Specimen, by W T Oppenheimer, M D, etc, Richmond, Va

The Didactic Teaching of Human Anatomy, by F W Langdon, M D, etc, Cincinnati, Ohio

A Contribution to the Pathology of Spinal Caries, by Milton Josiah Roberts, M D, etc, New York

Umbilical Cord, by C W Kelley, M D, etc, Louisville, Ky

Frozen Sections of the Male Pelvis showing relations of Peritoneum to Rectum, Blapder, and Median Line of Abdominal Wall, with special reference to

Supra Pubic Cystomy, by Albert B Strong, M D, Chicago, Ill

The Mesocephelon of the True Reptile, by E C Spitzka, M D, etc, New York

The Anatomy of the Rectum and its relation to Reflexes, by J M Matthews, M D, Louisville, Ky

Paper, title not announced, by L S McMurtry, M D, Danville, Ky

Studies in Brain Surgery, by Hal C Wyman, M D, Detroit, Mich

The Peritoneum and its relation to Injuries of the Bladder, by N B Carson, M D, St Louis, Mo

Contribution to the Pathology of Knee-Joint Disease, by Milton Josiah Roberts, M D, New York

The Groove of the Central Veins on the Inner Table of the Calvarium, by Frank R Fry, M D, etc, St Louis, Mo

Anatomical Considerations concerning the Application of Plaster of Paris Dressings to Fractures of the Femur, by W B Rogers, M D, etc, Memphis, Tenn

The Anatomy of the Urethra and Prostate Gland and Bladder, with special reference to Surgical Relief for Enlarged Prostate in Old Men, by Wm C Wile, M D, etc, Philadelphia, Pa

Presentation of Anatomical Specimen, by George Benjamin Johnson, M D, etc, Richmond, Va

Anatomical Points involved in Loss of Complete Scalp, including one Ear and greater portion of the Eyelids, by F C Schaefer, M D, etc, Chicago, Ill

The Colon, by S K Crawford, M D, Chicago, Ill

Anomalies of the Middle Thyroid Artery, with presentation of Specimen, by Max J Stern, M D, etc, Philadelphia, Pa

The Anatomy and Relations of the Cæcum and Vermiform Appendix with Special Reference to the Surgery of the Parts, by Hermann M Briggs, M D, etc, New York, N Y

On Comparison of Twenty Superior Maxillary Bones, by E M Wilson, M D, Bridgeport, Conn

The Destruction of Dissection Room Offal, by H C Boenning M D, etc, Philadelphia, Pa

Anatomical Points of Value in the Diagnosis and Treatment of Some of the Joint Affections, by N Stamm, M D, etc, Fremont, O

A Plea for some Reforms in the Present Methods of Teaching Anatomy, by Wm Perrion Nickson, M D, etc, Atlanta, Ga

The Anatomy of the Vermiform Appendix, with some of its Anomalies, by F M T McKennan, M D, etc, Pittsburg, Pa

The Proper Methods of Teaching Anatomy, by A P H Leuf, M D, etc, Philadelphia, Pa

Paper, title not announced, by Joseph Dickson, M D, etc, Pittsburg, Pa

Reports of Three Cases of Nephrectomy, with special reference to the Anatomy, by Geo Halley, M D, etc, Kansas City, Mo

The Anatomy of Stricture, by J Kneely Rhodes, M D, etc, Philadelphia, Pa

The Pivotal Point in Anatomy and the Principle Underlying It, by W H Triplet, M D, etc, Woodstock Va

WM H. PANCOAST, A M, M D,
President of Section

SECTION X—DISEASES OF CHILDREN

The Section will meet at 3 P M, Monday, September 5

The following papers will be read in the order named

1 An Investigation to Determine whether the Absence of Sewage and of Water Pollution diminishes the Prevalence and Severity of Diphtheria, by Dr Chas Warrington Earle, Chicago, Ill

2 Rate of Growth in American and British Children, and its Bearing on the Investigation of Diseases, by Prof W Stephenson, Aberdeen, Scotland

3 The Diseases of Faulty Habit, by Dr James F Goodhart, London, Eng

4 Deleterious Results in Children of a Narrow Prepuce and Preputial Adhesions, by Prof Lewis A Sayre, New York, N Y

The discussion will be opened by Prof W T Belfield, Chicago, Ill, and Dr DeForest Willard, Philadelphia, Pa

TUESDAY, A M, SEPTEMBER 6

1 The Milk Supply of the Cities Adulterations and Modes of Detecting Them, by Dr Cyrus Edson, New York, N Y

2 The Nutrition of Infants, by Prof Albert Leeds, Stevens Institute, Hoboken, N J

3 The Use of Cow's Milk in the Feeding of Infants, by Prof V C Vaughan University of Michigan, Ann Arbor, Mich

TUESDAY, P M, SEPTEMBER 6

1 Anatomical Characters of Membranous Croup as observed in Fatal Cases in the New York Foundling Asylum, by Dr W P Northrup, New York, N Y

2 Remarks on Tubage of the Glottis and the Manner in which it was Practised in France by Dr E Bouchut, Paris

3 Intubation of the Larynx, with Demonstration on the Living Subject, by Dr Joseph O'Dwyer and Dr Dillon Brown New York, N Y

4 Intubation versus Tracheotomy in the Treatment of Croup, by Prof F E Waxham, Chicago, Ill

WEDNESDAY, A M, SEPTEMBER 7

1 The Treatment of Strumous Glandular Enlargement of the Neck, by Dr Martin Oxley, Liverpool, Eng

2 Infantile Convulsions in Connection with After Neurotic Tendencies, by Dr J A Coutts, London, Eng

3 A Study of some of the Bacteria found in the Dejecta of Infants Affected with Summer Diarrhœa, by Dr W. D Booker, Baltimore, Md

WEDNESDAY, P M, SEPTEMBER 7

1 Hallucinations in Young Children, by Dr E Bouchut, Paris

2 Cerebral Irritation in Children, by Dr Jules Simon Paris

3 Treatment of Diphtheria by Antiseptic Sprays, by Dr Grancher, Paris

4 Treatment of Physiological Derangements in

Children due to Over Feeding, by Dr Cadet de Gassicourt, Paris

5 Notes on the Malaria of Children in Brazil, by Dr Moncorvo, Rio de Janeiro

THURSDAY, A M, SEPTEMBER 8

1 Observations regarding True Pneumonia in Children, by Prof A D'Espine, Geneva

2 Subject not announced, by Prof Oscar Wyss, Zurich, Switzerland

3 Some Observations on Headaches in Children and their Relation to Mental Training, by Dr W H Day, London

Discussion to be opened by Dr W S Dennett, Oculist, on Headaches in Children produced by Errors of Refraction

4 Scarlatina Nephritis from a Clinical and Pathological Standpoint, by Dr Henry Ashby, Manchester

Discussion to be opened by Frank Grauer, Pathologist, on the Pathology of Scarlatina Nephritis

THURSDAY, P M, SEPTEMBER 8

1 The Contagious Principle of Pertussis, by Prof Alfred Vogel, Munich

2 The Nature of Whooping Cough and its Antiseptic Treatment, by Dr Moncorvo, Rio de Janeiro

3 On Acetonuria in Children, by Dr Adolph Baginsky, Privadocent of the University of Berlin

4 Hereditary Syphilis and Rachitis in Brazil, by Dr Moncorvo, Rio de Janeiro

5 Marasmus, by Dr I N Love, St Louis, Mo

FRIDAY, A M, SEPTEMBER 9

1 The Treatment of Lateral Curvature, by Dr James Knight, New York

2 Anchylosis of the Knee Joint in a Straight Position by Excision as a Remedy for the Atrophy and Deformity following Acute Poliomyelitis of Childhood, by Dr Stephen Smith, New York

3 Hip Disease, Practical Points in its Treatment, by Dr A J Steele, St Louis

FRIDAY, P M, SEPTEMBER 9

Adjournment (optional) Mount Vernon Excursion Saturday

1 Forcible Correction of Contracted Knee Joint, by Dr E H Bradford, Boston

2 Progress of Orthopædic Surgery, by Dr Noble Smith, London

3 Section of Contracted Tissues essential before Mechanical Treatment can be Effectual, by Dr Lewis A Sayre, New York

4 The Scope and Limitations of Orthopædy, by Dr C Fayette Taylor, New York

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EXCURSION TO THE CONGRESS

A meeting of St Louis phyicians, who will attend the Ninth International Congress, was held on Saturday, August 6th A committee was appointed to make arrangements for an Excursion to Washington, by which all the delegates from St Louis might go together It was also proposed that an invitation to join this Excursion be given to delegates of Missouri Illinois, Indiana, Kansas and Arkansas, and others who can start from St Louis The Excursion will leave St Louis Friday morning, September 2, at 8 o'clock, by the Ohio & Mississippi Railway This will enable the delegates from Illinois and Indiana to join the party during the day, and arrive at Cincinnati at night The next day the Excursion will pass the beautiful Cheat River country, the Alleghany Mountains, Cumberland Gap and Harper's Ferry, reaching Washington via the Baltimore & Ohio Railroad, at 1 15 P M, Saturday, giving ample time to make all arrangements before the meeting The party will be personally conducted by Mr G D Bacon, General Western Passenger Agent of the Ohio & Mississippi Railway Special rates have been secured and the best accommodations promised by the Company These rates and accommodations are also extended to members of the families of physicians who may go The committee recommend that all physicians who expect to attend, arrange to be in Washington not later than Saturday Those who desire to join this Excursion, please communicate at once with Mr Bacon, or with any of the committee State whether a through sleeper is desired

The committee further recommend that on account of the probably crowded condition of the places of registration, that members should register in advance, by sending ten dollars to Dr J M Toner, No 615 Louisiana Avenue Washington, D C Enclose a stamp for return receipt or ticket of registration This ticket of registration entitles you to the three (3) large volumes of proceedings, even though you should not attend A great many physicians from neighboring States have already written that they would join this excursion

I N LOVE, M D, Grand & Lindell Ave's,
J R LEMEN, M D, No 3217 Lucas Ave
Wm PORTER, M D, No 3137 Lucas Ave
St Louis, Mo *Committee*

LOCAL COMMITTEE OF ARRANGEMENTS —TO THE MEDICAL PROFESSION The Local Committee of Arrangements have the pleasure to announce to their American brethren that the widespread desire to attend the Congress is such that the amount of money for the reception and entertainment heretofore deemed sufficient will be entirely inadequate to provide for the large number that will be in attendance They are therefore constrained to appeal to their brethren throughout the country for additional subscriptions to the entertainment fund They feel that to their patriotic countrymen it is only necessary for the fact to be stated in order to secure the sending of such liberal contributions as will insure the entire success of the social features of this great international gathering on a scale commensurate with its dignity and importance Let all Americans come to the front, and insure to ALL the members the full measure of the hospitality of free America Contributions should be immediately forwarded to Dr C W Franzoni, member of the Finance Committee for the District of Columbia

By order of the
LOCAL COMMITTEE OF ARRANGEMENTS

DR GEORGE FIELDING BLANDFORD, 71 Grosvenor street, London, formerly Lecturer on Psychological Medicine at St George's Hospital, has promised to give a "General Address" before the International Medical Congress "On the Treatment of Recent Cases of Insanity in Asylums and in Private Houses" Dr Blandford occupies a high position among the psychologists of England, and his address will doubtless prove instructive

THE PROGRAMME OF THE GENERAL ADDRESSES before the Congress is understood to be as follows

Monday—Address by the President of the Congress, Dr Davis

Tuesday—Drs Flint, of New York, and Semmola, of Naples

Wednesday—Drs Unna, of Germany, and Blandford, of England

Thursday—Drs Lutaud, of Paris, and Neudorfer, of Vienna

Friday—Business meeting

Many of the Presidents of Sections will open their sessions by an appropriate address, and there is likely to be an *embarras de richesse*, as the worthy papers are apparently in excess of the time allotted the sessions for their reading and discussion

Committees of Reception for foreign delegates have been appointed in New York, Boston, Philadelphia, and Baltimore

MISCELLANEOUS.

RECOGNITION OF DENTAL GRADUATES —At the meeting of the Chicago Dental Club on June 27, 1887, the following was adopted

WHEREAS, At the last annual meeting of the American Medical Association, held in this city, a resolution was passed recognizing the graduates of all Dental Colleges which require a thorough course of instruction in all the fundamental sciences which underlie Medicine and Surgery, equal to the standard required by the best Medical Colleges of our land, as entitled to membership in in this Association with all its privileges, and

WHEREAS, Our honored friends, Drs N S Davis and W W Allport, of Chicago, were largely instrumental in bringing about this action of the Association and

WHEREAS, Both of these gentlemen have always taken an active interest in promoting higher education among dentists, and were also largely instrumental in the establishment of Dental Chairs in the Medical Colleges of our city, and the Section of Dental and Oval Surgery in the International Medical Congress, therefore, be it

Resolved, That we, the members of the Chicago Dental Club, express our appreciation of their untiring efforts and devotion to the cause of higher professional education, and the elevation of our "specialty" to the position which its scientific attainments deserve

JOHN S MARSHALL,
A E BALDWIN,
J AUSTIN DUNN

HEALTH IN MICHIGAN, JULY, 1887 —For the month of July, 1887, compared with the preceding month the reports indicate that diarrhœa, cholera morbus, cholera infantum and dysentery increased, and that rheumatism, influenza, neuralgia, bronchitis, pneumonia and tonsilitis decreased in prevalence Compared with the preceding month the temperature in the month of July, 1887, was higher, the absolute humidity was more, the relative humidity was less, the day ozone was about the same and the night ozone was less Compared with the average for the month of July in the nine years, 1879–1887, cholera morbus, cholera infantum and diarrhœa were more prevalent, and intermittent fever, consumption of lungs, remittent fever, scarlet fever and diphtheria were less prevalent in July, 1887

Including reports by regular observers and others diphtheria was reported present in Michigan in the month of July, 1887, at thirty six places, scarlet fever at twenty five places, measles at twenty seven places, typhoid fever at sixteen places, typhus fever at one place

Reports from all sources show diphtheria reported at three places less, scarlet fever at twenty four places less, typhoid fever at four places more, measles at nine places less, small pox at one place less and typhus fever at the same number of places in the month of July, 1887, as in the preceding month

SOUTH MICHIGAN MEDICAL ASSOCIATION —At its annual meeting, held in Adrian, July 12 1887, the following officers were elected for the ensuing year President, Dr D H Wood, of Quincy, Vice President, Dr J F Jenkins, of Tecumseh, Treasurer, Dr M P Malden, Tecumseh, Secretary, Dr B Whelan, Hillsdale

DINNER TO FOREIGN MEDICAL EDITORS —The Association of American Medical Editors will give a banquet to distinguished medical editors from abroad on Monday, September 5, 1887, at 10 o'clock P M, at the Riggs House, Washington, D C

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM AUGUST 6 1887, TO AUGUST 12, 1887

Major J C McKee, Surgeon, ordered for duty at Watertown Arsenal, Mass S O 181, A G O, August 6, 1887

Major H E Brown, Surgeon, sick leave extended to August 6, 1887, on account of sickness S O 184, A G O, August 10, 1887

Major P J A Cleary, Surgeon, ordered to Ft McDowell, A T, instead of Ft Assiniboine, M T S O 110, A G O, August 5, 1887

Capt Jno M Dickson, Asst Surgeon, died August 8, 1887 (station Ft Mason, Cal)

Capt J C Merrill Asst Surgeon, ordered from Ft Klamath, Ore, to Watervliet Arsenal, N Y S O 181, A G O, August 6, 1887

First Lieut Wm E Hopkins, Asst Surgeon, ordered from Angel Island, Cal, to Ft Mason, Cal S O 184, A G O, August 10 1887

First Lieut C N B Macauley, Asst Surgeon, promoted to be Asst Surgeon with the rank of Captain, by operation of law August 10, 7887

First Lieut J E Pilcher, Asst Surgeon, ordered from Ft Monroe, Va, to Ft Wood, New York Harbor S O 180, A G O, August 5, 1887

First Lieut C L G Anderson, Asst Surgeon (station, Whipple Bks, A T), ordered to Ft McDowell, A T S O 81, Dept Ariz, August 3, 1887

First Lieut Wm N Suter, Asst Surgeon, ordered to return to Washington Bks, D C, on the breaking up of the camp at Creedmoor, N Y S O 166, Div Atlantic, August 10, 1887

CORRIGENDA

In THE JOURNAL of Aug 13, p 193 col 1, 7th line, omit *posterior*

On p 195, column 1, 7th line read "thus will the perineum be *sacred*"

On p 196, paragraph beginning 'Dr Boisnière," begin to read with "Naegelé teaches" etc

In 4th line of that paragraph read *nevt in frequency* for "last in frequency" In 13th line of same read *these cases* for "his cases" In 14th line insert *or* after "flat" In 27th line read *placed* for "face" Omit last half of line 32 and first half of line 33

Page 196, 2d col, 7th line from bottom, read *insolation* for 'isolation'

Page 198, col 1, line 29, insert *such* before 'force" Same line 40, read *automatism* for "automation' Same p 2d col, 3d paragraph, for 'Yet, cases are reported" read "Yes cases are reported"

On p 199 summary of 1st table, read 'Of 24 known" etc Summary of 2d table, omit "not," and read 'Of 20 known 15" etc Summary of 3d table read 'Of 18 known," etc

Page 200 under 4, 2d col, 5th line, for 'new elements," read *nerve elements*

Page 204, col 2, under *Case 1*, 6th line, read "and the sight became very dim"

Page 206 22d and 23d lines of col 1, read *micro organisms* and *neuro retinitis*

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ORIGINAL LECTURES

LECTURE ON THE TREATMENT OF TYPHOID FEVER

BY PROF DR HERMANN VON ZIEMSSEN,

DIRECTOR OF THE MEDICAL CLINIC IN MUNICH

Since typhoid fever was recognized as a disease *sui generis* it has always stood as the prototype of acute infectious diseases, and on that account it should be studied with especial diligence

After the anatomical nature of typhoid fever was determined in the first part of this century, and it was definitely separated from typhus fever, there was begun a reform in every way in the treatment of the disease The older of the now living physicians still remember the time of the so called indifferent therapy of typhoid of 30 to 45 years ago The brilliant results of the water treatment of typhoid fever (on Currie's precedent mostly by cold douches) were forgotten in the next decade, and again brought to light in the fifties With the introduction of the cold water treatment new life was given to the dietetic treatment of fever The care of the skin, for good bedding, for pure air in the room, for proper food and nursing of the patient, were the immediate results of the treatment by baths In the Prussian army Brand's method has reduced the mortality from 26 to 8 per cent Since Brand and Jurgensen published their first works on the subject the therapy of typhoid fever has been a constant object of the most zealous study, not only as regards hydropathy, but also in regard to pharmaco- and dieto-therapy The active treatment of typhoid fever, especially the bath treatment, has been more and more widely used in private practice, and it seems that after the important moderation in the energy of the cooling was introduced, the present active therapy of typhoid fever may be regarded as a valuable and permanent progress of therapeutics As between the extreme hydro therapeutists and those who would "rid the world of the water pest," I do not doubt that the true road to success in the cold water treatment of typhoid fever lies between the two extremes

Before entering into the details of the treatment of typhoid fever I will consider two cardinal objections to the active treatment of typhoid fever, which, if they correspond to the facts, are of great signification It has been recently claimed that in spite of the treatment the mortality of typhoid fever remains the same From this it would appear that the kind of treatment makes no difference in the ultimate result of cases of typhoid fever, and that the number of deaths in a single epidemic would be determined by factors beyond the power or control of treatment This stand point was taken by Port (*Archiv fur Hygiene*, Bd 81 u, 83) From the statistics of the Munich Garrison he draws the conclusion "Low ground water causes severe infection, high ground water light infection Treatment is without influence on the mortality, and of late years the low mortality has been due to the high ground water" But Vogl, who worked over the same material as Port, and from the clinical stand point (*Deutsches Archiv fur Klin Medicin*, Bd 36 u 37), showed that Port's conclusions were not supported by his material, and that the influence of a methodical cold water treatment in diminishing the mortality of typhoid fever is incontestable

The second objection was raised by Fiedler (*Jahresbericht der Gesellschaft fur Natur- und Heilkunde zu Dresden, 1883–1884*) whether with the diminishing frequency of typhoid fever in Germany the disease had not changed in its character, whether typhoid fever had not become another and milder affection That the mortality of typhoid fever generally has considerably diminished is shown by the numerous statistics from the different German States, and this is true not only of the large and smaller cities but also of the low country As the cause of this one may, without violence to facts, consider the improved draining of the soil, the improvement in the dwellings, better drinking water, in short, general hygienic activity of the people, of families and of individuals In many places in Germany, as in England, the coincidence of decrease of typhoid fever with the completion of canalization is very striking It is not long since I showed in regard to the city of Munich that with the progress of drainage there was a gradual, and since the Spring of 1880 a a sudden decrease in the number of cases of typhoid fever, for which there could be found no other cause than the drainage of the city Analogous results have been shown in many other German and English cities The reverse is seen in the old condition of affairs in cities which have done little or nothing in the way of improving drainage

The question as to the change of character of typhoid is worthy of consideration The possibility of such a change of an infectious disease in the sense

[1] Translated by permission of author and publishers from advance sheets by Wm G Eggleston M D of Chicago

of a diminution of its infectious properties certainly cannot be disputed, as is shown by the history of epidemic diseases, and since by drainage of the cities the germs of infection are more and more withdrawn from the soil, and thus great epidemics are now more infrequent, it is certainly conceivable that the severity of the epidemic is also lessened, since experience shows that the general mortality has a certain relation to the morbidity But despite the diagram of Dr Port we cannot acknowledge any influence of the state of the soil water on the typhoid morbidity and mortality, after proper drainage has been made And when by proper drainage and hygienic measures on the part of the people generally and individuals the frequency of typhoid is lessened, and great epidemics are no more seen in the places made healthy, it is not proved thereby that the intensity of the infection in other cases is lessened It can certainly be said that of late years the cases of typhoid fever in this city which were neglected in regard to proper diet and baths in private houses during the first and second weeks, but were otherwise in good circumstances, and were then taken to the hospital, showed on admission the same severe type, the same complications, and the same decubitus as were seen in former severe epidemics Nor have our trials of an indifferent, *i e*, purely dietetic treatment, of typhoid without antipyretic treatment, which were made for the purpose of comparing the two methods, shown by their results that typhoid has become milder, or that it, as Fiedler reservedly expresses it, from a clinical and pathological anatomical view it has taken another form The variations which Fiedler adduces, such as the former appearance of roseola in the first week, possibly depend on local influences, at least we cannot affirm such an occurrence in Munich The same may be said in regard to the variations from Wunderlich's normal temperature cure of typhoid The laws of the temperature range which Wunderlich propounded for single cases are dogmas, which are scarcely true for half the cases, and we should not count every deviation from this "type" of temperature range as abnormal Bi-hourly taking of the temperature in typhoid has shown a good deal more than appeared from the former morning and evening measurements, as has been shown by Immerman and me (Kaltwasserbehandlung des Typhus, Leipzig, 1870) and Weil (Zur Pathologie und Therapie des Abdominaltyphus, Leipzig, 1885) The same is true of certain so called symptoms in measles and croupous pneumonia and angina the so called "typical" course of the temperature is not so frequent as the "atypical"

Finally, it may be said that the changes from the former course of typhoid are partly due to antipyretic treatment—the infrequency of decubitus, of furunculosis and other destructive processes of the skin, laryngeal ulcers, etc Nor has this method of treatment been without influence on relapses of typhoid Hence, from the observation of many thousand cases of the disease I must say that typhoid fever has certainly decreased in frequency, but its character has not changed

The decreased mortality of typhoid fever during the last twenty years is due to two factors 1 Important improvement in the dietetic treatment 2 The antipyretic anti infectious treatment It has been justly said that it is not right to attribute the results of the present methods of treatment solely to antipyretic measures, and that we should not undervalue the influence of the improvement in dietetics of typhoid fever Attentive nursing, careful regulation of the skin, rational feeding—these are factors of the greatest importance But it must be remembered that measures were called out, and first made possible by the antipyretic methods, and chiefly by the cold water treatment With the introduction of frequent baths and taking of temperature arose the necessity for trained nursing and care of the patient The improved care of the skin is the direct outcome of the baths, and the improvement in the appetite and the corresponding effects on the stomach and intestines are to be ascribed prominently to the baths It was seen that assimilable food could be given in large quantities, and that it could be assimilated, and that the oxydation of the albumen of the organism, so much increased by the fever, was less with the antifebrile treatment, and from these two facts appeared the important result that the body generally, as well as each individual organ, came out of the infectious process with less damage than formerly, and that the patient's ability to work was restored more quickly than by the former indifferent treatment Rightly has Vogl said that it is not enough to know that the patient has escaped from the infection, but we should also know in what condition the whole organism and each particular organ has come out from the disease The question as to the amount of damage, and in how far antipyretic treatment can prevent this damage, can only be determined by continual determinations of the loss of weight, the duration of the inability to work, and an analysis of the convalescence under the different methods of treatment Vogl has already shown by a series of cases that by his method of strict water treatment the loss of weight is only about twice as great as in croupous pneumonia, and that after the conclusion of the emaciating period, which is 24 days in typhoid and 10 days in pneumonia, the period of return to the old weight is 17 days in typhoid and 18 in pneumonia This is certainly strong evidence in favor of the strict antipyretic treatment, and so much the more so as the material for observation in these cases (soldiers) was much more favorable for exact comparison, on account of similarity of constitution, than in civil hospitals

There are many skeptics to whom these facts will not be proof, the stock answer of these doubters is "You can prove anything by statistics" But it is seen that the authors who dispute the value of statistics use them for their one sided views Observation at the bed side shows the value of the antifebrile anti infectious method of treatment

I have already shown you at the bed side the different methods of treating typhoid fever I have shown you cases in which in spite of the severity of the symptoms and the height of the fever only a purely dietetic treatment was used On the other

hand you have seen cases of equal intensity of infection which were treated by moderately cooling hydrotherapy and antipyretic drugs In this way you have had the opportunity of seeing how continually high was the fever under the purely dietetic treatment, how severely the brain was affected, how great the muscular weakness, and how various the incidental symptoms In patients treated antipyretically, on the other hand, you have seen after the bath often marked reduction of temperature, moderation of the pulse and respiratory movements, restful sleep, and, especially, immediately after the bath free sensorium, clear vision, a fresh countenance, greater muscular strength, a longing for food The difference is most clearly shown by the cases which come into the hospital in the second or third week, after a so called indifferent treatment up to this time These people are usually in tolerably good circumstances, working people, artisans, students, and are the most severe cases, they show most clearly how important is a methodical treatment from the beginning of the disease, and how the prognosis is rendered worse the later the patient comes under such methodical treatment Liebermeister and Hagenbach have pointed out these facts in their excellent work on the use of cold water in febrile diseases, and I cannot sufficiently emphasize their importance Do not mistake my meaning I do not claim that a patient cannot receive in private practice the same methodical treatment as in the hospital, on the other hand, there are many factors that obtain in private practice that are more favorable than in a hospital, such as food, care and nursing By the above remarks I mean cases in which lonely young people who cannot get such attention, baths, ventilation, change of bed, etc, as they should have during the first weeks of the disease Such patients present the most severe type of typhoid fever, with all the secondary symptoms and complications that we were in the habit of seeing ten years ago and more in the majority of cases

We will first consider the dietetic treatment, in its widest sense, which has to do not only with the feeding of the patient but also with the nursing and care, the bedding, ventilation, moving, and psychical and intellectual activity of the patient To begin the methodical treatment of a case of typhoid fever there must be an appropriate room for the patient and a trained nurse, male or female

An appropriate sick room for the patient should be quiet, if possible not opening on the street, roomy and easily ventilated, and so much the better if a small room adjoins in which baths can be given It is absolutely essential that quiet reign in the room and in the immediate surroundings, unless this be the case the irritable nervous system is still more irritated by the continual noise In cities, however, these conditions are hard to fulfil, but we can demand that the largest and otherwise most suitable room in the house be used, and even that the "best room," the parlor, be given up to the patient It is important that there be a second bed in the room, standing near the patient's bed, to which the patient can be lifted when his bed is soiled or when it is otherwise necessary to arrange his own And a frequent change of beds is especially gratifying to the patient, it is very pleasant to be lifted from his hot bed and tumbled bed-linen to a fresh cool bed, and frequently it causes a half-hour's refreshing sleep

The care and nursing of the patient must be entrusted to a trained nurse It is one of the most important points in the treatment that there be correct, reliable and uniformly quiet nursing, that the temperature be taken by a skillful hand, that the baths, the cleansing, the feeding, the administration of medicines, etc, be all punctually and quietly done, and that this should be done day and night Nursing of the patient by female relatives is to be advised against, as decidedly objectionable from the standpoint of the physician They are too much interested in the case, disturb him, ask questions, and rob him of rest He should have complete physical and bodily rest, and not have his attention called to his surroundings Nor should the patient have visitors—not even his most intimate friends Until far advanced in convalesence there should be no visitors, no conversation, no intellectual activity or excitement The nervous system and heart are extremely exhaustible, and any exertion of the mind, any agitation of the heart may cause bad results

In all cases the patient must be absolutely prohibited from moving himself or getting out of bed, even to go to stool, or from one bed to the other It is not infrequent that patients in late stages of typhoid fever, in attempting sudden muscular action, such as standing, die suddenly from heart paralysis due to suddenly increased blood pressure So, too, emboli of the pulmonary arteries, by sudden dislodgment of autochthonous heart thrombi, may be caused in this way And not less dangerous are such bodily movements for the ulcerated and meteorismic intestine, which may be ruptured by sudden compression of the contracting abdominal and psoas muscles The patient should be lifted from one bed to the other, and should pass his urine and fæces while lying down, or held in a half upright position by the nurse

Especial attention should be given to the ventilation of the sick room When the weather permits the upper window in the room should be open day and night In winter the room should be thoroughly aired at least three or four times daily

The greatest order and cleanliness should prevail in the sick room, and everything which can cause uncleanliness or smell should be removed

It is the duty of the nurse to record regularly the temperature (two or three times hourly), frequency of the pulse, of respiration, frequency and quality of the stools, etc The physician can then, at each visit, see the condition during the last few hours by a glance at the record

A water mattrass as long and wide as the bed is indispensable in severe cases for the prevention of bedsores When it is properly filled the patient rests very easy upon it, with no pressure on the sacrum It should be so filled that the patient's body, by reason of its weight, does not press on the bottom of the mattrass, and that there are no air bubbles in the mattrass The physician should see to this, as the best nurses cannot always be depended on Some of

these seem to be small matters, but the smallest matters may be very important for the well being of the patient The round air-pillows found in many families should not be used, as the very thing that we wish to avoid, circulatory troubles from pressure, will be produced by these things along the whole circumference of the soft parts pressed into the ring One day's use of such apparatus will produce a cyanotic condition of the skin

The back, and other parts of the patient upon which he lies, should be rubbed once or twice daily with spirituous solutions, such as weak warm rum, Cologne water, etc They not only improve the subjective feeling of the patient, but also excite the circulation of the parts pressed upon and at the same time act well upon the nervous system through the organs of smell Any one who has ever been in such a condition knows how much these little things add to the comfort of the patient

We now come to the most important part of the treatment of typhoid fever—the feeding of the patient Thirty years ago oat and barley water was the only food allowed in *febris nervosa*, as typhoid fever was then called, wine was allowed in convalescence, but not during the febrile period Then came a time when albuminous food was forbidden on the ground that it would be but adding oil to fire A change for the better came from England, where fluid albuminous food and stimulants, especially alcoholics, were given from the beginning of the disease, and the German physician was accused of keeping his typhoid fever patient hungry At first the German physicians were very cautious with albuminous and alcoholic foods, but it was soon shown that under better feeding the patient withstood the disease much more easily, that less strength and flesh were lost, the convalescence was more rapid, and that less time was lost from work The experiments of Jos Bauer, Kunstle and H von Hosslin, made at the Munich Clinical Institute, and which showed that on the one hand the fever was not increased by giving fluid albuminous food and alcohol, and that on the other hand a large part of the nitrogenous food was absorbed in spite of the fever and diarrhœa, that it was of benefit to the organism, and that at all events the consumption of the albumen of the body was limited—these researches did much to naturalize a methodical good feeding in Germany Of course no pure albuminous food is given, and still less fatty food We must adhere as closely as possible to the normal proportions of food stuffs for the healthy organism as given by Voit, with the special consideration that fats are taken with difficulty by fever patients, best in milk, and that the carbo hydrates are not only best taken and best borne, but that they markedly limit the consumption of the albuminous and fatty matters of the body

Especial consideration must also be given to the changes and variety in taste and in the consistence of the food Nothing is so repugnant to the normal appetite and stomach as sameness in form and kind of food, and the typhoid fever patient is, possibly on account of his small appetite and weakened digestion, still more sensitive to sameness of diet Careful attention should therefore be given to variety of fluid food I say "fluid food," because solid and pudding-like foods cannot be given on account of the condition of the ileum, the ulcers of which might be irritated or ruptured

A large variety of preparations can be made from the carbo hydrates Starch, dextrin and sugar may be given in various forms, both in soup and drink, they are used through the whole course of the disease in mucilaginous soups Oat and barley water, as thin as possible, is to be recommended as drink, by the addition of sugar, cinnamon or wine, etc , variety may be given to the taste Then there are the manifold compounds of starchy and meat soups These should all be strained, and solid particles removed from them Clear meat broth, with or without yolk of egg, meat extracts, etc , are also recommended The meat broths must supply the necessary fatty food, as also the butter added to the soups and the milk Milk is the most complete mixture of albumen, fat and carbo hydrates, and is an excellent food in typhoid fever, but too much of it will cause uneasiness in the stomach Unfortunately, too, many persons cannot take it at all Usually I do not give more than one pint in 24 hours

In regard to other albuminous food I especially recommend freshly expressed meat juice, which, in so far as concerns digestibility, is preferable to eggs, etc In our hospital 15 or 20 pounds of beef are cut in pieces as large as the hand, a piece of linen cloth placed between each two pieces, and the whole put into the meat press (Reulaux's) The juice which escapes from the press consists of serum, lymph and blood, it is placed in a porcelain vessel and used as needed The reaction of the juice is generally slightly acid when it comes from the press, it must therefore be placed on ice, and should be prepared fresh every 24 hours About 150 or 200 grams should be used during 24 hours As, according to Voit and Bauer, this juice contains 6 per cent of albumen, the consumption of albumen during the day would thus be from 9 to 12 grams It should be given partly in teaspoonfuls, as medicine, and partly in the soup (2 tablespoonfuls to the cup) The soup should not be over 46° C (114 8° F), because the albumen of the juice would be coagulated, and if the broth is too hot it must be cooled before the juice is added For cases in which all food is rejected by the stomach Dr Ludwig, Physician to the German Hospital in London, uses a frozen meat juice which is well retained Meat juice is preferable to egg albumen and yolk of egg as a food on account of its greater digestibility, and on account of the fact that a patient will take it for weeks without repugnance, whereas he would soon refuse the daily use of egg albumen In further favor of meat juice is the fact that it does not cause the slightest digestive troubles, such as eructations, gastric oppression, or flatulence in typhoid fever I have used it daily for twelve years, in thousands of cases, not only of typhoid fever but of other diseases, and can recommend it most highly The meat preparations of Kochs and Kemmerich, as well as the Rosenthal Leube meat solution, are also to be recommended, but the taste of these prepara

tions often causes eructations, and prevents their use for any length of time, which is not the case with expressed meat juice Meat extract should be added to broths and soup in small quantity from the beginning of treatment, not merely on account of the taste, but as a stimulant to the nervous system No more than a small quantity on the end of a knife should be used to the cupful of soup, so that the taste may not be too pronounced

The addition of yolk of egg to the soup easily becomes repugnant to the patient, causing eructations and abdominal uneasiness As a rule, more than three eggs during the day should not be used, though account must be taken of individual digestibility and idiosyncrasies A very judicious combination is yolk of egg with brandy, in the form of Stokes's brandy and egg mixture The addition of butter to the soup improves its taste as well as its quality as a food, as is true of the addition of salt

I use wine from the beginning of the disease in the form of light non acid white or red wines, about a pint a day According to my experience the often used red wine cold in active intestinal symptoms (profuse diarrhœa, meteorism) is not favorable, but when it is warm, in the form of mulled wine (half a pint of red wine cooked with cloves, cinnamon and sugar), has an excellent effect on the diarrhœa and meteorism, so, too, tea with rum, grog made of good cognac, and taken not too hot I also use cognac regularly in the form of Stokes's brandy and egg mixture as medicine, a tablespoonful every two hours It consists of the yolk of two eggs, cognac 50, cinnamon water 150, simple syrup 30 grams The taste is exceedingly pleasant

It will be seen that our typhoid diet contains a tolerably large quantity of albumen, fat and carbo hydrates, though the albuminous matters are in proportionately larger quantities than the carbo hydrates, as compared with the usual health diet Renk calculated that in my clinic the proportion in the daily diet of a typhoid fever patient, which the patient easily took, was 91 parts of albumen, 78 of fat, and 100 of carbo hydrates In his typhoid fever diet at the Munich Military Hospital Vogl uses a proportion of 60 of albumen, 45 of fat, and 200 of carbo hydrates, and this is nearer to the proportion for the healthy man, which Voit places at 85 albumen, 30 fat, and 300 carbo hydrates, and Forster for the non-working public dependents at 67 albumen, 38 fat, and 266 carbo hydrates On account of the consumption of organic albumen in typhoid fever the amount of albuminous food must be proportionately larger The researches of H von Hosslin and Vogl show in the most unmistakable manner that organic consumption is limited by such diet, and that the duration of convalescence is shortened

The preparations of lime are also useful, as the lime can preserve a large part of the albumen from decomposition (Voit, Senator) They may be used in the form of jellies, best prepared from fresh calves' feet with white wine On account of their refreshing and pure taste they are very grateful to the patients, and may be given as a kind of cordial between other meal times

It need scarcely be said that the energy of the feeding and the use of stimulants should correspond with the intensity of the disease, in a mild case, with a good constitution and moderate fever, it is not necessary to feed with the same energy as in a severe case with high fever, weak heart and considerable local lesion in the ileum But it is advisable at the beginning of each case, even the mildest, to regard it as one which in the second or third week may become severe, and on this account the organic consumption must be prevented as much as possible by good feeding But as a rule, the feeding and stimulants should be proportioned to the disease

A diet table should be made out for the 24 hours, so that the attendants may follow it punctually and exactly, and thus the food and stimulants will be given at the right time As a rule it is advisable, in severe cases, to give food every two hours, and drink (barley water, wine) and medicine between meal times In this way the whole quantity of fluid food can be given, and the necessary variety given The patient should be fed at night as well as during the day, but in mild cases consideration must be had for the patient if asleep But in severe cases the two hour rule must be rigidly adhered to

In regard to the diet of convalescence, it is well to follow the usual diet of health, though somewhat modified, but from the beginning of convalescence, that is from the first feverless day, I order fluid diet (except that biscuit may be soaked in the fluid food) for five days This may savor somewhat of routine, especially to those who allow solid food during the whole course of the disease, but I recommend this nevertheless The return to solid food should be as follows First breakfast, tea with biscuit, one soft-boiled egg, second breakfast, 100 grams of finely minced raw bacon with wheat bread crumbs Noon, 150 grams of pigeon, young chicken, partridge, finely minced in soup, later with a mild sauce and a tablespoonful of *puree* of potato (prepared with milk), with wine or export beer Afternoon, tea with biscuit or cakes Supper, mush and milk, two soft-boiled eggs, some raw bacon This may soon be followed by calves' feet for breakfast, then an English broiled beefsteak or cotelettes of mutton with compote, and in the evening strengthening soup and some beer At this stage, when the patient thinks of nothing but eating, something new in the way of food must be given daily This is less the business of the physician than of the cook, but the physician should see to it that the food is properly prepared and digestible Fruit jellies and compotes, as of pears and apples, are very grateful now, as also wine and calves foot jelly, and rice meal or grits well cooked, etc Raw fruit is not without danger, and is best withheld during the first three or six weeks after the decline of fever, especially as cooked fruit in the form of compotes may be allowed in small quantities every day It is very pleasant for the patient to have something between meals to prevent his feeling hungry, a cup of meat broth or wine jelly, a soft boiled egg, a few oysters, or some caviar with butter and wheaten bread, and a glass of Madeira or Chablis may be given *(To be concluded)*

ORIGINAL ARTICLES.

PATHOLOGY, DIAGNOSIS AND TREATMENT OF PERFORATION OF THE APPENDIX VERMIFORMIS

Read in the Section on Surgery at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

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Lest the title of my paper should lead to the impression that I have made observations of a practical nature on this grave condition, calculated to serve as a guide to the practitioner, let me announce at the outset that my inquiry is directed to the discussing of means for the clearing away of the doubts that cluster around perforation of the vermiform appendage

It is highly probable that many of the cases which run the ordinary course of typhlitis may originate in a slight yielding of the coats of the appendix, that allows an exudation of its contents and sets up a local inflammation in the neighboring tissues, with a shutting in of the pus by adhesive inflammation between the serous membranes around Such cases having the effects confined to a limited area of the abdominal cavity do not present the phenomena of general peritonitis, but retain the characteristics of a circumscribed inflammation

Having treated of the "Surgical Relations of the Ileo cæcal Region" in a paper laid before this body at its last meeting, and having contributed a paper on the "Surgery of the Ileo cæcal Connections" to the October, 1886, number of *Gaillard's Medical Journal*, I must presume upon an acquaintance with the points therein presented My attention will therefore be confined to the peculiar phenomena connected with perforation of the vermiform appendage, so far as they are capable of being considered separately from other forms of intestinal perforation, and peritoneal inflammation from other causes

The anatomical seat of the disorder is so definitely fixed in its commencement, that it would seem a simple matter to diagnosticate the origin of the symptoms, yet practically it proves a most difficult thing to differentiate the train of disorders associated with this accident from those troubles growing out of derangements in the ileo cæcal region from other causes The sympathetic disturbance in the abdominal viscera from local lesions are very obscure, and it is observed that in strangulated hernia, for instance, the pain is not located at the constriction but at the umbilicus In the case of strangulated inguinal hernia for which Dr N B Carson practiced resection successfully, it is stated, that "while skating, the patient was suddenly seized with a severe pain in the abdomen, which he did not locate definitely" Other instances might be cited in illustration of the absence of local symptoms in acute cases of obstruction of the bowels, and the history of the local origin of general peritonitis from perforation of the intestines, rarely presents an indication of the point at which it has occurred The same is observed in the early manifestations from perforation of the appendix Dr J D Bryant's fatal case of perforation of the vermiform appendix, exhibits strikingly the want of those local symptoms which might serve as a guide to the nature of the trouble at the outset He states that the patient has been suddenly attacked with a moderately severe griping pain in the epigastric region He noticed no pain or tenderness in the right iliac region About fifteen hours afterward, the pain became more severe than at the outset, and was still located in the epigastric region The tenderness on pressure was general, but was best marked, however, at the lower portion of the abdomen No isolated point of extra tenderness was discovered All pain was referred to the epigastric region, the same as at the outset of the attack

In the case reported by Dr Tiffany and in two of my own cases there has been a feature which has not been noted by others so far as I have observed, the pain in the privates If it should turn out that this is present in any considerable proportion of the cases of perforation of the vermiform appendage, it would prove an important element in the diagnosis It is difficult to trace any sympathy between the inflammatory process which accompanies the exudation from this particular locality, and the genital organs, nor does it appear that there is any influence that could be operative in perforation of the appendix rather than in typhlitis But the fact of pain in a marked degree being present in these three cases, which were verified as cases of perforation of the appendix, stands forth as an indication which may lead to some practical inference in making up the differential diagnosis of this condition It is desirable that other observers should direct their attention to this point in the early stage of trouble in the cæcal region, and report upon its presence or absence when the subsequent progress of the cases confirms the reality of this affection

This occurrence would seem to be more frequent in later years, if the fact of its existence formerly has not been overlooked in its effects being confounded with peritonitis from other local lesions It is evident that some of the cases are only brought to light upon a necropsy being instituted, and the profession now very properly insists on such examinations in obscure cases Unfortunately, the people are not educated up to the point of assenting to a proposition by the medical attendant to open up a body for the good of others and the promotion of science, and we often have difficulties to encounter in securing a post mortem examination of a patient But perseverance will generally be rewarded by the consent of friends having a fair measure of intelligence, and the insuperable prejudices of ignorant people can sometimes be set aside by using means of preventing decomposition along with the exploration under the plea of embalming the body It is, at the present stage of the history of abdominal disorders, so important to make autopsies in obscure cases that I would urge upon the profession accurate record of every symptom in cases of suspected perforation of the vermiform appendage, and in fatal cases all the details of the post mortem observations

I had an opportunity recently of making post-mortem examinations in two cases of perforation of the appendix, which were reported in the *Medical and Surgical Reporter*, of February 5 and April 20, 1887 In both of these patients the symptoms indicated trouble in the ileo cæcal region at an early period, but the location of the pain and tenderness on pressure was not limited in such form as to indicate the origin of the inflammation, and I am forcibly impressed with the difficulties attending any precise diagnosis of perforation of the appendix vermiformis before the disease has progressed so far as to render operative measures of little avail The double process of cutting down in the iliac region, and subsequently resorting to laparotomy, for the relief of cases attended with general peritonitis, has not been attended with satisfactory results, so that it behooves us, if possible, to go over the whole ground anew to discover some criterion for our guidance in such cases An occurrence of inflammation in the tissues of the cæcum, constituting typhlitis, from some accumulation within its cavity, may be relieved by evacuating its contents, and thus terminate by resolution, but it is very rare, if ever, that extravasation of fæcal matter in ulceration of the cæcum is not followed by a discharge in one or another direction It is therefore recognized by those of most practical experience as proper, at an early stage of inflammatory development in the vicinity of the cæcum, to make an exploratory puncture, to ascertain if there be any deep-seated focus of pus, and in the event such source of trouble is detected, a free incision, communicating with the hidden septic seat, is warranted

It is impracticable to determine the exact source of the suppuration, even when the opening at the bottom of this wound is large enough to admit the index finger for the purpose of exploration, and as a consequence the surgeon cannot decide generally, whether the lesion is in the cæcum or appendix, when the fæcal odor leads to the unmistakable inference of the escape of the intestinal contents As a rule, based upon the anatomical relations of the serous investment of these parts, any discharge through a perforation in either enters the peritoneum, and yet, by adhesive inflammation, may be confined to the immediate proximity of its escape, and hence produce a circumscribed abscess there On the other hand, when perforation of the vermiform appendix occurs, and the contents become diffused to a greater or less extent in the peritoneal cavity, the inflammatory action extends and constitutes general peritonitis with all its serious consequences, or may be partial from limitation by the surrounding adhesions between different layers of the peritoneum

We must seek an explanation of the train of disorders following perforation of the appendix in the irritating quality of the discharge from the opening, whether this be caused by the disintegration of tissue from a localized ulceration of the walls, or from the mechanical pressure of some foreign body or concretion within, which cuts its way through the structure into the peritoneum

There is present in the appendix at all times either fluid or solid fæcal matter, which escapes whenever an outlet exists, and though the quantity may be small at the outset, it gradually increases, so as to permeate in different directions, and being a toxic irritant, it sets up inflammation wherever it comes in contact with the delicate serous membrane, and ultimately induces destruction of its vitality, so that it breaks down in a necrosed state This brings about the ordinary results of typhlitis, perityphlitis, paratyphlitis or general peritonitis, and the object of the surgeon is to arrest its progress at a point least detrimental to the patient

The propositions I would submit for consideration are *first*, the impracticability of making a differential diagnosis between perforation of the walls of the cæcum and those of the appendix, and *second*, that the treatment in its preliminary steps is very similar, so that the operative procedure does not imply a knowledge of which is involved in the given case in advance of its adoption

The pathological modifications of the tissues in contact with the exudations from either must be identical, on the principle that like causes produce like effects, and the extent of such structural changes depends upon the area involved in the permeation by septic matter It is a well ascertained fact that the contact of fæcal matter with any of the tissues of the body other than the mucous surface with which it is brought into close relations in passing through the intestines, causes rapid disintegration of structure, and propagates a hurtful influence to all the adjacent tissues, with a general depression of the vital powers A concise and yet comprehensive paper by Professor Beck, of University College, London, in Heath's "Dictionary of Practical Surgery," gives the characteristics accompanying perforation of the appendix vermiformis so satisfactorily that I will avail myself of it for a general outline of its concomitants

Perforation of the vermiform appendix is most commonly caused by the presence of a concretion or foreign body within it According to Dr Fenwick, who has collected and analyzed 129 published cases, amongst those in which the nature of the obstructing body is recorded 28 were concretions, 14 hardened fæces, and 5 foreign bodies Amongst the cases in which no concretion was found, tubercular ulceration seems to have been the most common cause of perforation, and a few occurred during or after typhoid fever Concretions are most common in males under 20 years of age In my two fatal cases referred to already, one, in a gentleman about 32 years old, resulted from a bean becoming impacted in the appendix immediately below its attachment to the cæcum The other, in a youth 10 years old, was caused by an oblong pointed fæcal concretion located about the middle of the appendix

The effects produced by perforation of the vermiform appendix vary with the anatomical relations of the part and the seat of the ulceration According to Mr F Treves the appendix commonly lies behind the end of the ileum and its mesentery, and is directed upwards and towards the left In the only other common position it ascends vertically behind the cæcum It may, however, be so placed that its

free end lies at the brim of the pelvis If perforation takes place near the attached end, or if the whole tube lies behind the cæcum, the abscess would be in the same situation as that resulting from diseases of the cæcum, and would be indistinguishable from it When the appendix occupies its more common situation, and when the perforation occurs in the free part, it is followed either by general peritonitis, usually fatal under a week, or by the formation of a collection of pus enclosed in a cavity formed by the surrounding coils of intestines firmly united to each other by adhesions According to Dr S Fenwick in 95 cases of which accurate details could be obtained, 38 presented localized collections of pus

Premonitory symptoms may be entirely wanting, but occasionally there is a history of obscure pains in the right iliac fossa or of periodic attacks indistinguishable from ordinary typhlitis

In the cases in which perforation is followed by diffuse peritonitis, there is usually a sudden invasion, often during some violent exertion The pain commences in the right iliac fossa, but soon extends to the whole abdomen There is constipation, distension of the abdomen, and absence of evident movement of the intestines The abdomen is tender, but most markedly in the the right iliac fossa, when some fullness may be felt The symptoms are much less severe than those of perforation of the stomach or other parts of the intestines, as the extention of the inflammation is less rapid owing to the absence of the abundant extravasation of the intestinal contents For the same reason collapse is not marked Vomiting, often of dark colored matter, is a marked symptom, as in all other forms of peritonitis

The symptoms of perforation with localized peritonitis are much more obscure The invasion is usually somewhat sudden There are localized pain and tenderness in the right iliac fossa The pain resembles colic in character There is usually constipation, but it may alternate with diarrhœa Vomiting is commonly present After a day or two an irregular, diffused, elastic swelling may be felt in the right iliac region At this time rigors are not uncommon, with temperature 103° to 104°, accompanying septicæmia General peritonitis with intense injection of the serous membrane, and adhesions of recent date between the different coils of intestines and the parietes of the abdomen exist Purulent fluid may be found localized by surrounding adhesions, or diffused in the peritoneal cavity

In the diffuse form the diagnosis from other forms of perforative peritonitis can only be made by the comparative absence of collapse, by the commencement of the pain in the right iliac fossa, by the tenderness in that region, and by the somewhat gradual extension of the inflammation to the peritoneum generally The localized form most closely resembles simple typhlitis, and sometimes can hardly be distinguished with certainty As a rule the swelling is more diffused and more acutely tender at an early period than in simple typhlitis, and the constitutional symptoms are much more marked, (Heath's Dictionary of Practical Surgery) An exploratory operation to discern the source of the disorder, or a post-mortem examination, are the only means of reaching a definite conclusion as to the precise nature of the case, and if we would avoid the latter the former must be resorted to at an early period

Until recently patients suffering from perforation of the vermiform appendix were practically left to die under the soothing influence of opium, when their end was not hastened by purgatives, enemata, and other violent measures There is, however, no doubt that whenever perforation takes place the only chance of life lies in opening the abdomen early and freely draining the cavity This is applicable to those cases in which there is general peritonitis, and still more so to those in which the mischief is localized, whenever a diagnosis can be made

The incision should as a rule be made above the outer part of Poupart's ligament, and should be about three inches in length The muscles should be carefully divided and the peritoneum freely opened The vermiform appendix should then be sought for, and, if it be found and is evidently diseased it may be ligatured with catgut and cut away If there is diffused peritonitis, with purulent fluid amongst the coils of the intestines, an attempt may be made to clean the cavity by means of sponges squeezed as dry as possible, after being soaked in some antiseptic solution, such as carbolic acid (1 40) corrosive sublimate (1 500) or tincture of iodine (ʒij to Oj) If the pus is distinctly localized in a cavity, it is better not to attempt to clean it out, for fear of breaking down the surrounding adhesions After the operation a large drainage tube should be inserted and the wound closed as far as possible by sutures The operation should be performed with antiseptic precautions, and some antiseptic dressing be applied

It may be necessary in some cases to modify the incision Should the swelling be situated near the middle line, Professor Beck says the abdomen might be opened at the outer border of the rectus muscle, but care must then be taken not to wound the epigastric artery He erronously claims that the middle line can seldom be a suitable situation for the incision, as, being so far removed from the seat of the disease, the drainage would not be efficient All who have had practical experience in laparotomy for inflammatory affections will doubtless differ with him in this, as the linea alba is now generally preferred for the incision, and by carrying it to a sufficient extent no difficulty is found in reaching any part, and in effecting drainage satisfactorily It devolves upon the operator likewise to resort to copious irrigation, with or without antiseptics, to remove all purulent collections from the cavity

In the debate upon penetrating wounds of the abdomen at St Louis I adverted to a simple process for detecting the presence of fæcal matter or blood in punctured or gun shot wounds, which is applicable for an explanatory operation in cases of suspected perforation of the vermiform appendix The report of my remarks will be found on page 596 of THE JOURNAL of November 27, 1886 They may be summarized by stating that the doubt as to existing lesions of the intestinal canal may be resolved usually by passing two tubes through an opening in the ab-

dominal wall at the site of the injury, both being of a length to reach throughout the cavity, with the outer end of one free and open, while the other is joined to a Davidson syringe The drainage tube should be fenestrated for some inches from the extremity that is within the abdomen, and the other end left entire outside to carry off the fluid injected, with whatever admixture it may contain, whether sanguineous, fæcal, or purulent A solution of common salt at a temperature of 100° F , may be thrown into the peritoneal cavity continuously, and allowed to pass out by the escape tube, until the water returns free from the abnormal ingredients therein contained If the outer termination of the syringe be then secured to the fenestrated tube, while the other is removed from the cavity, suction will remove the remaining fluid I am impressed with the advantages likely to be derived in diagnosticating the conditions resulting from perforation of the vermiform appendix first by aspiration, and subsequently by the process of irrigation here described, as it is evident that a flexible tube may reach accumulations not accessible to the straight or curved metallic tube ordinarily used with an aspirator The puncture made in aspirating would not suffice for the insertion of a tube, and it would therefore be requisite to make such an incision as to admit a single tube if suction only was indicated, or two tubes if irrigation was intended This incision should be no larger than necessary, and ought to be made in that part where the supposed exudation or suppuration could be reached most directly Such a proceeding is called for in the first instance as a means of diagnosis, but may become afterwards an important measure of treatment when a diffused inflammation in the abdominal cavity coexists with local conditions requiring the standard operation by an incision in the iliac regions Thus the grave complications of following the ordinary procedure in cases of typhilis by abdominal section may be averted, and the prospect of a favorable issue enhanced

The adoption of prompt and efficient operative measures in the early stages of that inflammation which is set up by perforations of the vermiform appendix depends upon a recognition of the conditions at the outset, and a resort to the exploring needle or the aspirator directly through the tissues involved is warranted by the practical result of those who have had the most satisfactory results in treating this class of cases, as well as in the various modifications of typhlitis If there is one thing more than another that is pressed upon our attention by the recent developments in abdominal surgery it is that delays are dangerous, and we must take time by the forelock if anything is to be accomplished in snatching from the jaws of death a patient who is suffering from perforation of the vermiform appendix I am so convinced of the urgent demand for surgical interference at the very earliest practicable period after the occurrence of this accident, that even in a case of simple typhlitis with symptoms causing no misgivings as to perforation, it strikes me forcibly that any cautious surgeon would be authorized in cutting down above Poupart's ligament to verify the true state of the deep seated structures If no lesion is found in either the cæcum or vermiform appendix, no serious trouble is likely to follow such incision, but on the contrary the drainage effected from the immediate neighborhood of the tissues involved in inflammation must prove beneficial, and the history of early incisions where pus has not been discovered encourages the surgeon to adopt this practice

Should it appear, on the other hand, that a perforation, however slight, exists either in the cæcum or vermiform appendix, the recourse to Lembert's suture for lesions of the cæcum, and of excision with ligation in perforations of the appendix, afford the best prospect of staying the progress of disorganization A thorough cleansing of the adjoining tissues by antiseptic washes, avoiding the solutions of bichloride of mercury, is likely to correct the disintegrating process set up by the septic contamination, and by the continuous use of iodoform with the dressings of absorbent cotton, a reasonable calculation may be made of saving the patient It is not incumbent upon the surgeon to wait for a certainty of perforation—but when a just ground of apprehension exists, he should operate and give his patient the benefit of the doubt

The practical deductions from this inquiry in regard to the concomitants of perforation of the appendix vermiformis may be included under the following heads

1 The primary disorder is dependent upon a local irritant, either mechanical, chemical or vital, inducing ulceration and disintegration at some point in its walls

2 The modification in the tissues of adjacent parts depends upon the presence of a toxic exudation from its cavity, that ultimately leads to disorganization of structure

3 Extension of the degenerating process depends upon the permeation of the structures with the fæcal matter, but may result from suppuration, or the automatic propagation of inflammation from one part to another

4 Agglutination between the layers of peritoneum may shut in purulent accumulations, and thus limit the inflammatory action to a circumscribed area, so as to assume the nature of an abscess in that locality

5 General peritonitis may be accompanied by extensive adhesions of the adjacent serous membranes, and followed by vital prostration and collapse, calling for the knife

6 Septicæmia may occur from absorption of septic matter independent of suppuration, and associated with a low form of fever which ought to be treated by antiseptics and irrigation of the abdominal cavity by hot water

7 When there are sufficient indications of perforation in the general symptoms, with pain and tenderness on pressure over the cæcal region, without signs of fluctuation, an exploratory puncture below the ileo cæcal junction is warranted

8 If there are any reasonable grounds to believe that pus is present, or that there is extravasation of fæcal matter, whether from the perforation of the

cæcum or appendix, a free incision above Poupart's ligament should be carried down to those parts and drainage kept up afterwards

9 In perforation of the appendix associated with general peritonitis an incision in the linea alba affords the best prospect of reaching all the parts involved, and should be accompanied by thorough cleansing of the abdominal cavity and especially of the ileo cæcal region

10 The most efficient means of closing an opening in the cæcum is by Lembert's suture, while an opening in the appendix demands excision and ligation

11 When perforation is suspected, washing out the abdomen by the use of a syringe and two tubes will assist in the diagnosis and treatment

12 An early operation with a doubtful diagnosis of perforation of the appendix lessens the likelihood for a confirmation of it by a necropsy, and hence no time should be lost in awaiting developments

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THE CHIEF SOURCE OF DANGER IN THE USE OF THE UTERINE SOUND

Read in the Section on Obstetrics and Diseases of Women, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887

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It is the prevailing opinion of the medical profession that the principal danger to guard against in probing or sounding the uterus is traumatic lesion from incautious handling of the instrument This is also the teaching, positively or negatively, of nearly all the leading text-books on Gynecology, including those of such eminent authors as Emmet, Thomas, Goodell, Mundé, Hewitt and Courty

In the third edition of the "Principles and Practice of Gynæcology" Emmet says "Many a poor woman has endured years of bad health from the carelessness of her physician, in overlooking a latent cellulitis which became rekindled by the unskillful use of the probe or sound" Every student of this great master leaves his book with the impression that lesion from rough or incautious handling of the instrument is the danger chiefly to be borne in mind Conformably to this view, Dr E C Dudley, in his recent contribution to Pepper's "System of Medicine," conveys at once his own opinion on the subject as well as his impression of Emmet's teaching, that traumatism is *the* danger to be averted, by quoting him as to the dangerous use of the sound "from frequent lighting and relighting of pelvic inflammation *by injudicious slight manipulations*"

Writing on the same subject, Mundé says "The dangers attending the introduction of the sound are, the production of uterine colic or actual collapse from shock, a temporary affair, and of inflammatory reaction in the serous or cellular tissue of the pelvis

The precautions to be observed in using the uterine sound or probe, are chiefly comprised in the two words, *delicacy* and *gentleness*" In the English edition of Schroeder, which appeared in Ziemssen's "Cyclopædia," he says "As a rule I consider the sound harmless, provided it is employed by an experienced hand," but in the last German edition, 1886, he adds "If there is no abrasion of the mucous membrane *nor infectious matter on the sound*" In the fourth edition of Graily Hewitt's work on 'The Diseases of Women" there is not a word of caution, but the simple statement that "as a general rule, patients experience no inconvenience from the use of the sound if it be carefully introduced"

In the fifth edition of Thomas' classical work, "The Diseases of Women," the author himself expresses no definite opinion on this subject, but quotes Nonat and Scanzoni to show that for some reason sounding the uterus is very hazardous The former says "on account of the accidents which sounding may excite, it should only be resorted to with great caution and in those cases where its necessity is clearly shown" The latter, Thomas tells us, candidly acknowledges "that the uterine sound is by no means so harmless as has been asserted"

From Chrobak's contribution to Billroth's "Handbook of Diseases of Women" I extract the following "Since Broca in 1854 published the first case of death resulting from the introduction of the sound, the number of this class of cases, published, is quite large still larger the number where a slight or severe sickness (without fatal result) followed"

Now, when we consider the remarkable tolerance of the uterus of such surgical procedures as curetting, divulsing, not to mention accidental perforation, it appears to me that some more obvious cause must be found to account for the apprehensions expressed by the authors just quoted This prolific source of danger, comparatively unrecognized, lies I believe in septic matter conveyed into the uterine cavity by the non disinfected sound When we study the histological nature of the uterine cavity the danger becomes apparent We can all remember when traumatism was the bugbear which deterred us from entering the peritoneal cavity, and when, every now and then, a healthy patient succumbed to cystitis, (as the death certificate read) after merely being catheterized, we regarded it as due to traumatic shock But we have learned better I can myself recall many cases of grave cellulitis and peritonitis during the past twenty years, which, explained by traumatism, were unaccountably mysterious, but as due to septic infection, are painfully easy to comprehend Some surgeons like Mundé and Tait are so absolutely clean in their method of performing surgical work, no septic results occur, though apparently they ignore this principal source of danger and are conscious of guarding against traumatic lesion only Thus Mundé sounded the uterus five thousand times without a single catastrophe which only proves to my mind that Mundé practices better than he preaches A criticism equally true of the Pyo Salpingist of Birmingham

I would by no means detract one iota from the importance of delicate manipulation in exploring the the uterine cavity, but I maintain that the danger from traumatic lesion is completely overshadowed by

that from septic infection The enunciation by Nœggerath, in 1872, of the doctrine of latent gonorrhœa as a potent cause of pyo salpinx is but just now fully recognized, and instead of regarding Nœggerath's discovery as an isolated and exceptional fact, I believe it is one of a large group of facts illustrating a general principle

LeBec has investigated the course of the lymphatics of the upper portion of the vagina and cervix, and allege that they pass below and outside the base of the broad ligament to the obturator glands which communicates with the inguinal glands In the cervix the lymphatics of the mucous membrane are connected with the saccular sinuses extending near the epithelium of the inner surface of the mucous membrane (Lindgren) In the muscular layer we have lymph-vessels and lymph spaces, the lymph-vessels are most abundant in the external muscular layer and are connected with the lymph vessels of the mucous and serous layers and run into large valved canals at the side of the uterus Thus the lymph passes from the mucous membrane lymph spaces into the vessels and spaces of the muscular bundles up to the serous coat, and then passes into large tubes in the broad ligament Leopold considers the uterine mucous membrane as a lymphatic gland or lymphatic surface, intersected with glands and blood vessels, the lymphatics being not mere vessels but spaces between the connective tissue bundles

To the author of these anatomical researches, D Berry Hart, the collaborator of a clever work on Gynæcology, which he modestly styles a manual, belongs the distinction of being the first among English speaking writers to systematically call the attention of the profession to this still unappreciated danger We have, then, to look to Edinburgh for an advanced view like the following " The great dangers to the patient from the passage of the uterine sound, are abortion and abrasion of the mucous membrane, *with absorption of septic matter* and resulting cellulitis or peritonitis " Two cases of this nature are reported by Sanger, of Leipzic

It is manifest that a gonorrhœal pyo salpinx might be communicated as readily by an infected sound as by the extension of the disease from the vagina So too, a septic pyo salpinx, non gonorrhœal, whether derived from the virus of erysipelas, pyæmia, diphtheria or scarlet fever, may be carelessly transferred from the gynecologist's hand or sound, and give rise to a pelvic peritonitis with more or less systemic infection, such as has never been observed as the result of a gonorrhœal infection which is believed to limit itself to the mucous membrane Among the German authors Fritsch has done signal service to emphasize these dangers, and forcibly says "Always before introducing the uterine sound, dip it into a five per cent solution of carbolic acid, even though properly cleansed directly after its previous use "

Although these words belong to the New Testament of medical belief, and were uttered several years ago, the momentous truth inculcated is as slow of recognition and general acceptance as were the oracles of the inspired Semmelweis

DISCUSSION

Dr A Reeves Jackson, of Chicago I appreciate the invitation to address the Section upon this subject, but I find myself utterly unable to do so owing to the fact that I am just recovering from an attack of laryngitis I have been extremely interested in the paper and fully endorse the views given therein I think there is one source of danger in the use of the intra uterine sound that has not been mentioned, the attempt to make use of it as a placer in cases of displacement of the uterus I know from my own experience, when I was still more inexpert than I am now, that I attempted to do more with the sound than I would now do What I can now do better with my fingers I then attempted to do with the instrument I believe the author is right in attributing the source of danger to septicæmia in the way he has described The paper is a very excellent one, and is likely to lead to the best results

Dr E W Cushing, of Boston I think the thanks of the Section are due to Dr French for bringing up this important subject There is one particular which he did not dwell upon, that is that it is not merely the sound which carries the infection from some previous case, but that the vagina in itself is a hot bed for various kinds of bacterial growth Any one who will examine the discharge of the secretions of the uterus will find various kinds of bacteria and there is no doubt but that these bacteria will cause septic inflammation It seems to me that the sound is very apt to be innocent if reasonably well taken care of, but where great care is necessary is not only in disinfecting the sound but the vagina and the neck and mouth of the womb before the sound is introduced In hospital and private practice I invariably thoroughly irrigate the vagina with a bichloride solution, afterwards I cleanse off the mouth of the womb and then with a probe and carbolic acid cleanse out the cervical cavity before passing the sound into the womb With this precaution I have never had any trouble, and I do not think there is likely to be any except in cases of salpingitis, where the inflammatory action is already there or carried from the vagina into the womb

Dr C R Reed, of Middleport, Ohio No doubt it is true as stated that the vagina is a hot bed for the transmission of bacteria Then what is to hinder the bacteria at any time from traveling up the cervix through the Fallopian tubes and reaching the peritoneal cavity, they are so small that there would be no trouble in doing this When I use the sound I invariably use it through a speculum, so that it does not come in contact with the vaginal walls The paper of Dr French was a very able one, and one that teaches a practical lesson If the sound is dipped into very hot water or an antiseptic solution as suggested, I think it may just as readily be passed now as when Sims brought it into use forty years ago I have used it thousands of times, and I do not recall any instance in which I thought any inflammatory action followed the operation, but I take the precaution of invariably using it with the speculum or disinfectant

Dr W W Potter, of Buffalo, N Y I do not

wish to take up the time of the Section on this subject, but it is fair that I should express my appreciation of the paper of Dr French, because it follows out in a special way a line which I undertook to mark out in a more general way in this Section last year If we examine the literature of gynecology, both that which has been so easily cited from the text books by the author, and also the journalistic literature, we can but be impressed with the fact that there is a growing caution with reference to the use of this instrument, and it is a pretty general conclusion that observers have reached that it has done and is doing considerable hurt Whether it does it in one way or another may not be absolutely possible for us to determine But I have no doubt the author wishes to impress upon us that this is one, and perhaps the chief way in which the sound itself does harm Dr Cushing has mentioned the fact that the vagina is more or less loaded with bacteria or other germs which may be carried up by the passing of the sound through that tract even when the sound itself has been perfectly purified or sterilized before using I think there is something in that, and as these gentlemen have asked that the sound be rendered thoroughly antiseptic before using, let us also render the vagina so, let us precede the examination and treatment of the case by a thorough washing out of that cavity with an antiseptic solution

DR FRENCH said, in closing the discussion You will note that the subject of my paper was "The Chief Danger in the Use of the Uterine Sound" I tried to show that there is an alarming degree of danger which comes from the use of the sound, in some mysterious way I showed by records that injuries to the uterus by divulsing, etc, do not explain it I brought this subject before you because I think it is of importance, and no American text book touches upon it, yet I can show that it is a most prolific source of danger Gentlemen have said that the bacteria incident to the vagina are the prolific and almost as great a source of danger as that spoken of I demur, and for this reason We have demonstrated the fact that gonorrhœa produces pyosalpinx, we have also demonstrated the fact that there is a septic variety entirely distinct from this depending upon pyæmia, scarlet fever, etc In regard to the bacteria which exist in the vagina normally, it is a hypothetical view to take of the subject and the point is not proven, and while it remains a hypothetical question we have no right to consider it with the question of chief dangers in the use of the uterine sound

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CLONIC RYTHMICAL SPASM OF THE PRONATOR RADII TERES

Read in the Section on Practice of Medicine, Materia Medica and Therapeutics, at the Thirty Eighth Annual Meeting of the American Medical Association

BY HAROLD N MOYER, M D

LECTURER ON PHYSIOLOGY, RUSH MEDICAL COLLEGE INSTRUCTOR IN NERVOUS DISEASES, POST GRADUATE MEDICAL SCHOOL, CHICAGO

"There are few topics of more utility for the physician to study in our opinion, than that of monoplegias and mono spasms of hemiplegias and hemi spasms in their genesis, mutual relations, and diagnostic significance," says Seguin in his article on the general semeiology of nervous diseases, in the fifth volume of Pepper's "System of Medicine" A superficial examination of our standard text books, will show the paucity of information regarding hyperkinesis, except in so far as the symptom relates to the diagnosis of paralysis agitans, chorea or sclerosis A myoclonus limited to a single muscle, is not uncommon, and is usually observed in the ciliary, orbicularis palpebrarum, and masseter muscles The sterno cleido mastoid may also be affected with a clonic spasm, giving rise to one of the most painful forms of wry neck A case such as is here detailed of a clonic, rythmical spasm of a single muscle lasting nearly eight months without paralysis, contracture or atrophy has not until the present come under my observation, nor have I seen such described in any of the literature accessible to me

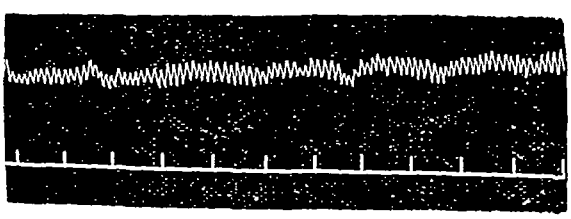
The history of the case is as follows

S C, school girl, age 17 years, of a healthy family, free from all hereditary neuroses Father and mother living and well, one brother died in infancy of some acute affection Patient is a slender but by no means delicate girl Began menstruating at the age of fifteen, and has never had any uterine or ovarian disturbance Gives no history of hysterical or "nervous" attacks Six months before present attack was troubled with an affection called, "gastric fever," by her physician, this was followed by some headache which was aggravated by anxiety over school examinations held at this time

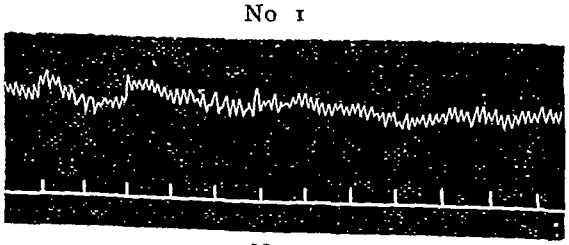
In October 1886, while sitting quietly at her desk in school, she suddenly felt her right arm jerking, she could not stop the spasm by any voluntary effort It continued the remainder of the day and the entire night The following afternoon, twenty four hours after the attack began, she presented herself at the clinic for nervous and mental diseases in Rush Medical College The pronator radii teres was found to be contracting rythmically about 120 times per minute Each contraction of the muscle pronated the hand, which as the muscle relaxed, immediately returned to a position a little short of midway between pronation and supination, when the next contraction again pronated the hand The movement exactly resembled voluntary pronation when performed as rapidly as possible If the hand was strongly supinated and held firmly considerable pain was felt in the muscle When the forearm was allowed to assume a natural position, no pain was felt, indeed the patient during the early part of the trouble never complained of any discomfort except a slight nervousness, due as she said, to the constant motion of the arm The muscle feels tense and cord like under the skin, but does not seem swollen No redness or any evidence of inflammatory reaction An effort was made to overcome the contractions by pressure on the median nerve, constricting the arm with a band, and fixing it firmly These measures did not diminish or prevent the spasm in the slightest degree Electricity

in the form of constant current was recommended She was treated for the next four months by her family physician with an ordinary interrupted current from a revolving dynamo machine, each application was attended with considerable pain For a month the contractions continued without intermission, sleeping or waking, and seemed to grow stronger The arm began to feel tired and weak About the first of December the contractions would cease for a minute or two several times each day At this time she began to feel pain about the elbow and along the inner edge of the biceps extending as high as the top of the shoulder, and the muscle itself was tender to the slightest touch

March 3, she presented herself at my office for treatment At this time the contractions were more rapid but the movements of the hand were less extensive Intense pain was felt along the median and musculo spiral nerves, with considerable pain over the shoulder on both superficial and deep pressure The constant current of from six to eighteen cells was applied over the muscle and along the nerves for about fifteen minutes daily The current was alternated using first an ascending and then a descending current, but care was taken to avoid interrupting Under this treatment improvement was rapid, the spasm became less marked, finer, and the intervals of rest longer and more frequent The pain which I regard as due to a peripheral neuritis entirely subsided In May the contractions were reduced to mere tremor, not unlike that seen in paralysis agitans, but on closer examination it is seen to be due to the successive and rapid contractions of the pronator A tracing taken over the muscle at this time showed about 400 to 420 distinct contractions a minute



No 1



No 2

Read from left to right The upper line in each tracing records the number of contractions, while the lower one represents the rate at which the drum was revolving in seconds of time No 1 shows the contractions as nearly equal in number and extent, and is typical of the larger number taken No 2 illustrates the effect of slight involuntary inhibition of the muscle the wider excursions of the pen and the wavy outline of the whole tracing represent slight movements on the part of the patient

From this time improvement continued, the intervals of rest became longer and more frequent, and during sleep the spasm ceased At present the tremor is so slight as to scarcely attract the attention of the patient She says that it probably ceases much longer than she is conscious of, for her attention is not called to the hand for hours at a time

This condition has never been associated with any incoordination of the other muscles of the arm Writing was accomplished without much difficulty, but caused great fatigue owing to the effort of the other muscles to overcome the action of the pronator The longer strokes were often wavy not unlike the appearance in beginning sclerosis During the course of the difficulty no other symptoms of nervous disturbance were present though they were carefully looked for Sleep was good except during the early part of the trouble when the movements were considerable The general health was not impaired No internal medicine was given excepting full doses of arsenic for about three weeks, which did not seem to influence the course of the disease

DISCUSSION

DR FRANK WOODBURY, of Pennsylvania, had had a patient, a girl, who had a clonic muscular contraction for two months It may have been hysterical There may have been malnutrition and defective innervation in the case under consideration

DR H DUNCAN BULKLEY, of New York, asked how much arsenic Dr Moyer gave

DR MOYER said that he gave gtt iij three times a day, and increased to gtt ix at the end of a week He rarely gave arsenic oftener than thrice daily, and that after meals In the case reported he saw no symptoms of uræmic poisoning or of gastric disturbance He has seen a chorea confined to a group of muscles or to the hand, but such contraction as in the case mentioned was never seen in chorea The pathological changes in the case may have been in the muscles, but he did not think so Except in chorea, paralysis agitans and sclerosis the pathology of muscular spasm is not well understood

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DIPHTHERIA AND TRACHEOTOMY

Read before the Medical Society of the District of Columbia, April 13, 1887

BY LACHLAN TYLER, M D,

OF WASHINGTON, D C

As common and fatal as this disease is, the profession is still more or less at variance regarding a discriminating definition of diphtheria In the opinion of many it is a malady separate and distinct from that other, so closely allied to it and termed pseudo-membranous croup, while on the part of others the belief is that the two diseases are really identical

It is partly with the hope of eliciting from the members of this society an expression of opinion concerning the questions of unity and duality that this brief communication is presented Only by free and full discussion, if necessary oft repeated, can a matter in such great dispute ever be brought to final settlement If there be but one disease—diphtheria —*that fact had better* be plainly and decisively con-

ceded, and the mind thenceforth disabused of any further idea to the contrary

It is not a difficult task to appreciate the harm which might be perpetrated by a confusion of ideas consequent upon a false conception of the illness to be treated Under such circumstances the sthenic condition attributed to so called membranous croup would be sufficient to restrain the hand in the beginning from administering appropriate remedies in anticipation of the treacherous onset of the asthenia of diphtheria, which, as subsequent events would show, had all along been in existence According to my own judgment, no distinction can be safely drawn in practice between the two diseases, and as a rule there is no good reason for making any Even in the minds of those who cling to the opposite belief a doubt is harbored, in the greater number of cases, as to which is presented, and the precaution is nearly always very wisely taken to provide against the possibility of its being diphtheria No comment is necessary upon making this simple statement

The effort to exact a pathology for each, which in essential particulars should possess a sufficient number of points of difference to distinguish them, has had no good results, and, indeed, can be said to have practically ended in failure The etiological factors, also, traceable in the history of the two affections, have not been shown to be dissimilar with any pronounced exactness

The greatest mistakes have ever and again occurred by relying upon the peculiarities of the membranous deposit for distinctive evidence of the existence of one or the other disease The simple truth would seem to be that it varies in character according to the severity and degree of penetration of the inflammatory process How far and in what manner this process is influenced by the constitutional state of the patient is not always clearly indicated The local effects are sometimes as severe in those with little bodily vigor as in the more robust, leaving whatever may be the amount of inflammation to be principally ascribed to the localization of the specific cause of the disease

In fatal cases of pseudo membranous croup it is maintained that death is primarily the result of asphyxia, due to membranous stenosis of the larynx, while in diphtheria the idea obtains that it is more in consequence of a septicæmia or toxæmia, ultimately producing paralysis of the vital forces

It is within the experience, however, of almost every practitioner to have seen cases of the former develop into well recognized diphtheria, and terminate accordingly, and of the latter disease, commencing in the most typical manner in the fauces, pass downwards and become complicated with croup On account of these facts it cannot but be admitted, therefore, that the two diseases are, at any rate, interchangable, and it would be going only a step further to believe that primary diphtheritic laryngitis might occur as well as diphtheritic faucitis or pharyngitis

If the two diseases are the same, the difference in contagiousness between them has been explained by their respective situations, and that in temperature in like manner In other words, if the larynx alone is attacked the infectious principle is situated at a safer distance than when located in the pharynx, and, according to observation, the temperature is likewise increased when the disease occurs at that point Glandular enlargements accompany membranous croup as well as diphtheria, and in each are dependent upon the degree of inflammatory action which may be going on They have been noticeably absent in some of the cases I have attended

The same sequelæ, including paralysis, are witnessed after either affection, the plain truth being that fewer cases of diphtheritic laryngitis survive, and they are, therefore, seen oftener when the diphtheritic process has remained confined to the pharynx

All pseudo membranous sore throats, occurring idiopathically, should for safety's sake, if for no other reason, be set down and treated as though they were diphtheria Those resulting from traumatic causes should of course have a different significance attached to them, and receive attention in accordance therewith

I consider it necessary to mention the name of only one man who may very properly be placed as authority at the head of those believing diphtheria and croup to be identical, viz Jacobi "In fact everything that has been written," says Dr Joseph E Winters, of New York, "by those who have contended that membranous croup is an independent disease, distinct from diphtheria, is nearly a compromise, and does not give one tenable diagnostic characteristic between them" To this I will add that there may be certain *library* differences between the two diseases, but none of clinical value

The question as to whether diphtheria is primarily a local or a constitutional disease still remains a mooted one That it is a local disease with a constitutional expression is, in my opinion, the correct conclusion, but the fact that it is opposed by many whose prominence in the profession entitles them to be heard with respect, and merits for their views the most deferential consideration, should prevent any one from assuming an attitude at all dogmatic in the premises Besides a considerable number of others, Oertel may be cited as advocating the theory that diphtheria commences in the throat, and that subsequently the whole system becomes infected by septic absorption through the lymphatic channels

All parties, however, occupy neutral ground in dealing practically with the subject, for from either standpoint, in order to gain any advantage over the disease, the treatment, so far at all generally approved, when carried out in full is always the same in principle and effect

In regard to treatment it is well to say that too much emphasis cannot be employed in condemning the idea that there is a specific remedy for diphtheria in the possession of anyone It is a threadbare argument that if such a remedy existed the great multitude advised and employed would not have been forthcoming, nor undergo such frequent additions In computing results from the various drugs administered for the cure of diphtheria nothing much more favorable to one than to another of them can

be discovered, and without being too sceptical, the belief might well be entertained that at times recovery from the disease was in the main dependent upon the mildness of its course and the persistency with which watchful care was observed

The statistics of Dr N Lunin, of St Petersburg, published in 1885 (*Medical Record*, vol 28, No 3), afford a fair idea of the utility of certain fashionable remedies Two hundred and ninety six cases were treated in the Children's Hospital of the Princess of Oldenburg All the children, with the exception of twenty five, are represented as having been well developed and well nourished The list of remedies used was composed of corrosive sublimate, iron, chinolin, resorcin, bromine and turpentine In the "phlegmonous septic" form of the disease, according to his classification, iron proved superior to any of the others, the deaths under its administration, however, reaching 76 5 per cent In the "fibrinous" form the oil of turpentine gave the best results, only 8 3 per cent of the cases treated with it dying

The treatment by iron and chlorate of potassium internally seems to have become the one quite generally agreed upon as being the most satisfactory The practice of administering iron, however, in such enormous doses to young children as ʒj, or more, frequently repeated, finds, and I think rightly so, little favor with the profession at large

The effort to use the spray too frequently and in spite of any violent resistance on the part of the child, is, in my judgment, an unjustifiable and hurtful procedure, in view of the additional amount of exhaustion it is likely to produce If its use, however, can be accomplished without unduly exciting the little patient to opposition, no question can be raised concerning the benefit it is capable of conferring

The insufflation of sulphur and other powders has at various times been highly recommended, but I have never witnessed any remarkably good results from it

Inunction with the oleate of mercury—a method of treatment, by the way, strongly advocated before this Society several years ago—has in my hands failed to produce the good which was to be expected

Remembering the asthenic tendency of the disease, it can only be in exceptional cases, and when our one desire is to lessen and render easier of expulsion a very thick and tenacious membrane, that such a depressant as pilocarpine can be given with any degree of safety or propriety Its use for eliminative purposes, in reference to the *materies morbi* of the disease, might far better be discontinued, as it is undoubtedly too dangerous a medicine with which to make such experimental tests It is safer to rely upon ipecac, zinc, turpeth mineral, or some other emetic whose effects, though practically the same so far as dislodging the membrane goes, are, comparatively speaking, less permanent in duration, and could, at any rate, more certainly be counteracted, should the occasion arise, by stimulants given with timely precaution

The carbonate of ammonium, given alone in full and frequent doses from the outset, and, if subsequently required, in conjunction with whisky, is a remedy in which, I am convinced, too much faith cannot be placed Not only as a diffusible stimulant is it exceedingly valuable, but as a solvent of the diphtheritic membrane also, in which capacity it possibly excels all others by the mode of its action through the circulation

Quinine deserves especial recommendation Given in tonic doses—preferably in the form of the oleate to the very young, by inunction—it seems to be potential in exercising a favorable influence in what might be termed its own peculiar way, and imparts to the physician a certain feeling of security and satisfaction difficult to define

Steaming, hot poultices, rubefacients—of which turpentine and camphor liniment are probably the best examples—and opiates to quiet restlessness and procure sleep whenever necessary, complete the catalogue of remedies of which I deem it worth while to speak

An ample supply of concentrated nourishment is always of prime importance, but here, at least, I do not believe in what is called forced alimentation Diphtheria becoming an acute wasting disease, must necessarily be accompanied by greater or less functional enfeeblement on the part of the digestive organs, which to be overtasked under such circumstances would only lead to complications of a character most certain to aggravate the preexisting low condition of the patient

Before leaving this part of the subject, I wish to say that any conflict of judgment arising between physicians in attendance upon any case of diphtheria —each with a hobby of his own concerning the most appropriate treatment to be adopted—is, in the present state of things, entirely uncalled for, since, as has been mentioned, there is no specific for the disease and, after all, there is very little difference in the results, it matters not what particular method of treatment is practiced The principal aim should be to prosecute any recognized mode of treatment which happens to be selected in a thorough and systematic manner, and without any vacillation, to the end

The operation of tracheotomy for the relief of the symptoms of diphtheritic laryngitis, while certainly not a difficult one to perform if ordinary care be exercised, remains in a more unsettled state than almost any other in surgery in reference to the exact time when it should be resorted to, and the extent to which benefit is conferred by it With the fact confronting us that many desperate cases recover under simple medicinal treatment, it cannot be successfully disputed that after the operation just as good grounds often exist for believing that recovery took place in spite of it, as that it was the means of saving the patient from what would have been otherwise inevitable death

The difficulty of deciding at the bedside upon the appropriate moment for the operation can only be overcome by authoritatively establishing it as the necessary practice immediately upon the occurrence of invasion of the larynx by the local process, as shown by the altered tones of the voice, and by the slightest interference with respiration

Ranke, of Munich, in a paper read at the fifty-eighth Congress of German Naturalists and Physicians, Strasburg, September, 1885 (*Medical Record*, vol xxviii, No 25), reported that upon the appearance of these symptoms he had operated the preceding seven and one half years in 45 cases with 19 fatal results, the number of recoveries therefore amounting to 57 8 per cent This is a higher percentage than is ordinarily attained when the operation is performed at irregular times, or principally for the relief of the most urgent symptoms of suffocation, and may be accepted as fairly illustrating all the advantages to be gained at the present time from the plan of operating so early

Were it not for the constitutional state engendered by the disease, the death rate from it would no doubt be reduced to the smallest proportions by the opportune performance of tracheotomy But even as it is, with the organism thoroughly impregnated with the poison of the disease, and in consequence engaging to a large extent in the production of the dyspnœa, it is nevertheless oftentimes instrumental in relieving so much of it as may be dependent upon the local causes which more directly tend to precipitate a fatal issue

A concensus of opinion is being very generally formed in favor of what may be called the *precautionary* performance of tracheotomy But in any instance in which, for good and substantial reasons, the operation is delayed, it should not follow that it must be entirely disapproved of, even as a *dernier ressort* The fact is, it may be appropriate at any period of the disease, but more particular when the *first* evidence of laryngeal distress is recognized It does not appear to be the only, nor, it might be said, been the principal effect of the operation, to admit of a supply of oxygen to the blood, because, in satisfying any demand for that elementary principle by other than surgical means, similar good results do not so positively occur I have had practical experience of this Aside from anything else, it no doubt also affords relief from certain nervous impressions causing many of the distressing phases of instinctive action

Without having had any experience with either intubation or deep tubing of the larynx, a substitute recently offered for it, I am inclined to think, after perusing the literature bearing thereupon, that as compared with tracheotomy they offer a more scientific and rational method of dealing with the majority of cases of diphtheritic laryngeal stenosis The double advantage they possess of being most effective in the later stages of the disease, and of presenting no obstacle to the performance of tracheotomy at any time, not to speak of the fact that they are calculated oftentimes to obviate the painful necessity of shocking the feelings of family and friends, or to at least establish euthanasia, would appear to be sufficient to commend them above and beyond tracheotomy in almost every instance How far they may hereafter succeed in revolutionizing that part of the treatment of diphtheria to which they are adapted cannot be foretold

The main objection offered to them, of disturbing the invalid to an unreasonable degree, and especially of subjecting him to the dangers of the upright position during the time occupied in introducing the tube, are not, I think, comparable in seriousness to those which can be advanced in respect to the measures resorted to in performing the operation of tracheotomy

MEDICAL PROGRESS.

MODIFIED LARYNGECTOMY —DR J SOLIS COHEN describes the following operation

1 Make an incision in the hyoid bone to the lower border of the cricoid cartilage, and exactly in the middle line

2 Carefully separate the sterno hyoid muscles

3 Hold the soft parts aside and insert, from above, one blade of a strong cutting forceps with narrow blades beneath one wing of the thyroid cartilage, one-fourth of an inch from the angle of junction with its fellow, and sever the cartilage vertically its entire length through to the crico thyroid membrane

4 Make a similar cut on the opposite side

5 Seize the freed angular portion of the thyroid cartilage, comprising its entire respiratory contingent, with a volsellum forceps, and draw it to either side, the soft parts being separated meanwhile from the inner surface of the detached wings of the thyroid cartilages with the handle of the scalpel

6 Make a transverse cut to sever the cricoid cartilage from the trachea (At this step, in the living subject, a sterilized cotton plug should be inserted into the upper end of the trachea, preliminary tracheotomy having been performed previously) (If the cricoid cartilage is to be retained, disarticulate the arytenoids, and then sever the soft parts above the cricoid instead of below This modifies the next step in the procedure accordingly)

7 Lift the cricoid cartilage forward and carefully separate it with the edge of the knife from the inferior edge of the cornua, laterally and superiorly, and then from the œsophagus posteriorly

8 Insert a finger into the pharynx from below and carry its tip over the epiglottis to draw that structure down

9 Divide the thyrohyoid membrane and the fibrous tissue still holding

10 Lift out the exsected respiratory portion of the larynx

The arteries likely to require ligation will comprise small branches of the superior, middle, and inferior laryngeals

Upon the living subject the operation should be strictly aseptic, and where practicable should have been preceded by several days by a preliminary tracheotomy The trachea may be occluded superiorly by a small rubber bag attached to the smallest sized soft catheter, introduced through the tracheal wound, above the canula, and then inflated The canula may be temporarily removed during the introduction of the bag and its inflation

Advantages alleged for this procedure

1 Its rapidity, ease, and comparative safety to the patient

2 The small size of the wound

3 The preservation of the attachments of the thyrohyoid ligament and of the greater part of the membrane, and of the thyrohyoid, sternohyoid, stylopharyngeus, and inferior constrictor muscles, leaving—

4 Important functional structures retained in their normal relations for deglution, and leaving—

5 A firm, natural support for the adjustment of artificial substitutes for the larynx

For these reasons it is submitted that this procedure should be preferred to complete laryngectomy whenever not precluded by extent of disease — *N Y Medical Journal*, June 18, 1887

CONVALLARIN AND CONVALLAMARIN —DR J N NATHANSON has made a theoretical and practical inquiry into the action of these glucosides Having reviewed the literature of the may-lily, he found that, as far as four chief preparations were concerned (viz, the infusion of the flowers, aqueous extract of the whole plant, tincture of the flowers, and American fluid extract), the opinions of various authors were by no means so contradictory and so doubtful as Langgaard had thought But—curiously enough—it proved otherwise in regard to the may lily glucosides, the active principles of the plant, convallarin and convallamarin (discovered by Walz in 1858), Marmé, who had experimented on both of them in 1867, found that convallarin was endowed solely with a purgative action, while convallamarin acted mainly on the cardiac muscle, being a "cardiac poison" Dr Isaïeff (1881) confirmed Marmé's statement on the latter substance, without touching the former But Dr Leubuscher (who apparently had worked with Tromsdorf's preparation) flatly denied any action of convallamarin, while Professor Maragliano and, later, Dr Bochefontaine declared that both of the may-lily glucosides possessed an identical action on the heart, the only difference being that convallamarin *acts stronger* than convallarin The first step made by Dr Nathanson, in view of this rather remarkable conflict in the statements concerning the "chemically pure active principles" of the plant, was to have the commercial glucosides analysed, a second, to undertake a series of therapeutic experiments at Professor Koshlakoff's clinic The first preparation of convallamarin obtained by him from Merck (in 1885) proved to be a mixture of that glucoside with convallarin and some products of decomposition of both, as an analysis by Professor A A Loesch had established The explanation of discrepancies between different observers was then pretty near Of course, no experiments were made with that preparation, and the purest glucosides were obtained from Merck to be given in four cases of disturbed compensation (in a patient, aged 15, with aortic regurgitation and relative mitral insufficiency, in two patients, aged 57 and 40, with aortic regurgitation alone, and in a patient, aged 48, with mitral regurgitation and stenosis) The results were these

1 Convallarin (given in the dose of from 0 06 to 0 12, three or four times daily for three to eight successive days) produced only nausea, diarrhœa, and gastric pain The pulse, breathing, daily amount of urine and dropsy either remained unchanged or showed unfavorable alterations

2 Convallamarin was administered in the daily (gradually increasing) dose varying from 0 03 to 0 3 gramme for eleven to seventeen successive days In one of the patients, to whom digitalis, scilla, caffeine, and adonis had been previously given and failed, convallamarin also remained, on the whole, inactive, the improvement consisting only in a slight decrease of dyspnœa and palpitation after exercise But in the remaining three patients a rapid and striking improvement ensued, the pulse became slower and more regular, the amount of urine augmented, dropsy decreased and all other signs of disturbed cardiac compensation gradually and steadily disappeared

3 Of accessory effects, only slight nausea, salivation, and giddiness were observed in one of the patients when the daily dose had been increased to 3 decigrammes, in another, slight nausea and vomiting made their appearance, when the daily dose had been raised to 0 35 and 0 4 gramme

4 *No cumulative action was ever observed* The general conclusion of Dr Nathanson is to the effect that convallarin possesses but a purgative action, while convallamarin represents a useful cardiac drug endowed with the power of re-establishing disturbed compensation, and free of any unpleasant accessory effects Selection of an absolutely pure preparation is a matter of paramount importance —*The London Medical Record*, July 15, 1887

METHYLAL —Methylal is a fluid of specific gravity 0 855, its vapor density is 38°, taking hydrogen as a unit, and a boiling-point of 42° Cent, 107 6° Fahr Its solubility in blood is one part in three, its composition is $C_3H_8O_2$ It is made by distilling methylic alcohol with sulphuric acid in the presence of peroxide of manganese, but it requires several redistillations before it can be obtained in the pure state, for which reason it is at present a very expensive compound When methylal is quite pure it is almost tasteless, but bites the tongue, and, owing to its low boiling-point, quickly evaporates The odor of it is fragrant, and not very powerful The pure vapor creates no irritation on being breathed After long exposure to the vapor of methylal, in an atmosphere containing not less than thirty-five per cent of the vapor, warm blooded animals may be made to pass into a sleep which, once established, is deep and prolonged

Methylal was first introduced by Dr B W Richardson, who in his early researches supposed that he had found that it was a marked narcotic, but he now states that he believes that the narcotism so produced was due to the presence of acetone from the methylal not having been sufficiently pure Recently, with a perfectly pure specimen, he endeavored to anæsthetize two dogs with methylal in order to enable them to be operated on painlessly After half an hour's inhalation of the vapor narcotism was not produced The fluid was then injected hypo-

dermically in one animal and to the extent of an ounce dose, upon which a gentle sleep, or rather intoxication, followed, but with no sufficient anæsthesia to allow painless operating In action as a medicine, methylal lies between alcohol and anhydrous ether It quickens the action of the heart with reduction of arterial pressure, it makes the respirations slow and deep, it induces a tendency to sleep, and it is a sedative to pain, but not to a very deep degree On the whole, it would be best to keep it in the group of anodyne antispasmodics, in which Dr Richardson originally put it It causes very little muscular excitement and no vomiting, but after long inhalation of its vapor it produces a free flow of saliva As it mixes well with alcohol and with ether it might be administered with either of these agents, and it might also be given with amyl nitrite for the relief of colic, asthma, angina pectoris, or tetanus, but before it can come into general use it must be reduced in price

Methylal is very soluble in water, and may be administered by the mouth when diluted with water, or by hypodermic injection Dr Richardson recommends commencing with a dose of a fluid drachm, mixed either with glycerin or syrup of orange flowers and distilled water —*Therapeutic Gaz*, April 15, 1887

ANTIFEBRIN AS AN ANODYNE IN SPINAL SYPHILIS —DR HENRY M FISHER reports (*Medical News*, July 23, 1887) a case of spinal syphilis in which severe pains yielded to five grain doses of antifebrin "The pains were due, I believe, to gummatous infiltration of the posterior columns of the spinal cord The patient contracted syphilis twenty-two years ago, and when I first saw him, ten years after the primary lesion, he complained of severe intercostal pains, so, even at that time, it is probable that there had been some infiltration of the spinal cord A few months later *right* optic atrophy occurred, and hearing in the *left* ear became much impaired At about this time paralysis of the facial muscles and hemianæsthesia of the tongue occurred In 1880 he had a fall on his head, and, a little while later, was found to be suffering with mental aberration and was treated for some months at the Insane Department of the Philadelphia Hospital, and later, at the Norristown Asylum In 1881 there was marked paresis of the left leg, and severe intercostal and girdle pains were complained of Under specific treatment, the pains diminished in severity, but, since another attack of the left hemiplegia last autumn, they seem to have occurred more frequently and with greater severity They were described as sharp, cutting pains, and extended from the upper intercostal spaces to the sacrum and also along the course of both sciatic nerves, more particularly the left There has been, at no time, any paralysis of the bladder

On June 22, having administered several quarter-grain doses of morphia with the effect of giving him only temporary relief, I ordered him an antifebrin (grs v) to be taken whenever pains were particularly severe One week later patient stated that he had not felt so well for a year The first powder checked the pain in less than half an hour When the pains recurred they seem to have been less violent, and, each time, five grains of antifebrin sufficed to check them, and so, after five days of this treatment, and after taking forty or fifty grains of antifebrin, patient is, temporarily at least, entirely free from pain"

July 8 Patient has had slight recurrence of the pains during the past week, but they were apparently far less severe than they were before No sweating and no prostration were caused by these doses

ALCOHOLIC CIRRHOSIS OF THE LIVER —MM STRAUSS and BLOCQ have made numerous experiments in regard to this matter They injected directly into the stomachs of rabbits daily a dose of 15 grams of a mixture of absolute alcohol, methylic alcohol and 1 part of water The animals usually fell at once as though by a stroke of lightning, and remained in deep coma for several hours When the animals were killed after a certain time the liver was found to present to the naked eye no very marked changes, and the surface was smooth, but the cut surface showed the acini apparently surrounded by a grayish-red zone or line In the livers of rabbits intoxicated for four or five months the ultimate peri lobular portal channels appear infiltrated with embryonic cells When intoxication is maintained for six or eight months the lobules are surrounded by a ring of embryonic cells There is thus produced a monolobular cirrhosis which realizes almost perfectly the scheme of Charcot Nothing is more natural than this localization of the lesion Alcohol reaches the liver through the portal vein, and one would naturally suppose that it would affect at first that part of the organ with which it comes in most perfect contact —*Semaine Medicale*, July 20, 1887

ANTIPYRIN IN UTERINE COLIC —M CHOUPPE reported to the Société de Biologie his successful treatment of two cases of uterine colic with antipyrin injections The first was in the case of a woman who suffered at each menstrual period with very painful colic which was with difficulty overcome by opium and chloral Antipyrin in the dose of 1 gram gave rapid relief The second was the case of a woman suffering from uterine colic following childbirth The pains were lessened for five hours by a first injection, and disappeared completely under the influence of a second —*Semaine Médicale*, July 20, 1887

NEW SUBSTANCE IN TUBERCULAR TISSUE AND ORGANS —E FREUND has found in various organs, as well as in the blood of tubercular patients, and both in the tubercle granules and in the diffuse tubercle tissue, a substance which he regards as cellulose because of its elementary analysis and its reactions He looks upon it as an essential part of the tubercular growth and of the blood of tubercular individuals This substance was not found in tissues and blood affected by various other diseases —*Centralbl fur klin Med*, No 27, 1887

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, AUGUST 27, 1887

DIET IN ALBUMINURIA

First in importance in the hygienic treatment of albuminuria, says Dr Purdy, in his excellent work on Bright's disease, may be ranked the diet of the albuminuric patient It is a subject to which very much study has been given, and which requires very much more In some observations recently made DR T GRAINGER STEWART, of Edinburgh, has sought to throw additional light on the question of the possibility of producing albuminuria by diet in persons whose kidneys were healthy, and to the effect of various forms of diet in patients affected with albuminuria

That slight, and sometimes marked albuminuria appears after meals is a well known fact, the mere ingestion of food of any kind will produce albuminuria in some persons, while others are only affected by particular articles of food The experiments of Stokvis, Lehmann, Lauder Brunton, Power, Dobradin, Claude Bernard and others in regard to the causation of albuminuria by egg-albumin, are so well known as not to require more than mention here In order to gain further information on this question Dr Stewart selected four persons whose urine showed no albumin even when tested with picric acid, and whose condition offered no objection to such a test

The first patient, one with locomotor ataxia, took ten raw eggs daily, in addition to his ordinary diet, for nine days Albumin appeared in two days from the beginning of the experiment, and while not large was sufficient to be shown by picric acid Twice it was shown by nitric acid, and each time an excess of the acid dissolved the coagulum, showing that it was not egg albumin but blood albumin that was present The albumin persisted from the day on which it appeared, but disappeared on the day on which the eggs were stopped In the second case, one of mitral incompetence, nine eggs were given for seven days "Albumin appeared on the first day, persisted throughout the experiment, and disappeared when the eggs were discontinued " It was distinct with picric acid, but was never shown by nitric acid The third case, a person free from organic lesion, was given ten eggs daily for three days in addition to his ordinary diet Albumin was distinct with picric acid on the first and third days, on the second it was sufficient to show with nitric acid, and the opacity disappeared when an excess of acid was added The fourth case, one of chorea, did not bear the eggs well, only three were given, and for three days only In this case also albumin was shown by picric acid while the experiment continued These experiments show "that the introduction of raw egg-albumin into the stomach causes albuminuria, that the albumin is always in small quantity, that it disappears when the ordinary diet is resumed, and that it is not egg-albumin, but serum-albumin which is discharged " This kind of albuminuria, therefore, cannot be explained on the theory of the absorption of egg-albumin as such into the blood, and its discharge from the kidneys, and the experiments further explode the speculation, in regard to this question, of the minute size of the molecules of egg-albumin and its greater transfusibility

By way of explanation Dr Stewart offers two suggestions First, owing to the large amount of albumin digested and absorbed the blood becomes surcharged with this material, and some of the excess escapes by the kidneys The second suggestion is related to some recent investigations made by Ralfe, Noel-Paton and Oliver Ralfe has shown the relation of functional albuminuria and hæmoglobinuria to the rate of destruction of the red corpuscles, and the formation of urea Noel-Paton has shown some of the relations existing between bile secretion and the formation of urea Oliver has shown that urea is mainly formed from the red corpuscles, and that the most active period of urea formation is when the liver is actively secreting during digestion In the light of these observations, then, it is reasonable to suppose "that in our experiments the liver was stimulated to excessive activity owing to the excessive amount of proteids ingested, that thus the red corpuscles were more rapidly destroyed, and that the albumin liberated from them not being all transformed into urea, was in part discharged by the kidneys " This suggestion is partly confirmed by the

facts observed in the test cases as to the urea discharge In the first three cases the urea was over normal while the eggs were taken, and fell back when the eggs were discontinued

From some experiments made on boys with cheese and walnuts Dr Stewart draws the general conclusion in regard to the effect of diet on the production of albuminuria in healthy persons, that while the ingestion of food has been shown frequently to produce albuminuria from idiosyncratic peculiarities, particular articles of diet induce it in some people, and while we may succeed in inducing it by the use of special articles of diet, yet the quantity of albumin is usually minute, and it has little tendency to persist after the return to ordinary food

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In regard to the question of diet in Bright's disease, Dr Stewart made some experiments with five diets ordinary, large, milk, low, low diet with eggs It may be said that the compositions and weights of these forms of diet are as follows ordinary diet, 59 ounces, 15 24 parts of carbonaceous and 4 25 nitrogenous matter, large diet, 71 ounces, 19 10 parts carbonaceous and 5 68 nitrogenous, milk 60 ounces, carbonaceous 6 4, nitrogenous 3 6, low diet, 65 ounces, carbonaceous 18 98 parts, nitrogenous 2 94, low diet with eggs, 8 raw eggs 14 5 ounces, carbonaceous 4 35, nitrogenous 5 8, and otherwise as in low diet The points determined in each case were the weight of the patient, daily quantity of urine, its specific gravity, the amount of urea, and the amount of albumin in grams per litre, determined by Esbach's method

In three cases of inflammatory Bright's disease the experiments, while not sufficient to warrant general conclusions, supported the view that milk diet or low diet are better suited to such cases than ordinary or ample diet In a case of cirrhotic Bright's, with inflammatory superadded, the ordinary and milk diets were used for periods of six days each, but without showing any effect upon the amount of urine or urea, and the albuminuria was not diminished by the milk diet From experiments on several cases of pure cirrhosis of the kidneys Dr Stewart is inclined to think that in this form of Bright's disease the diet is a less important element than it is in the tubular inflammation He has had no opportunity of making an extensive series of experiments on cases of waxy or amyloid kidney, but so far as his evidence goes he is inclined to think that the good nourishment which is otherwise indicated in that disease is not contra-indicated by the state of the kidneys, even though their vessels appear to be in a condition permitting of more ready transudation of albumin than is the case with healthy vessels

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The diet in the forms of albuminuria not dangerous to life may be given a short consideration In cases of febrile albuminuria, says Dr Stewart, the question of diet is usually of little moment, but in some, and especially in scarlet fever, there is a special liability to the occurrence of renal inflammation, and there is no doubt that a copious diet rich in nitrogen is very dangerous, and that something of the nature of low or milk diet is best for such fever cases, in convalescence as well as during the fever In the dietetic and persistent varieties of functional albuminuria individual peculiarities as to food are to be studied In accidental albuminuria diet is often of great importance "Above all, in cases of catarrhal inflammation of the urinary tract bland and milky diet is to be recommended I have often seen," says Dr Stewart, "great advantage in such cases from the adoption of an exclusively milk diet" But in some of the cases of albuminuria ordinary diet is best Alcohol is to be avoided in all cases of Bright's disease and in cases of inflammatory accidental albuminuria, unless there be need of direct stimulation of the circulatory or nervous systems

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UNSATISFACTORY MEDICAL APPOINTMENTS

Under this caption in THE JOURNAL of July 30th, 1887, we copied a preamble and resolution from the reported proceedings of the State Medical Society of W Va, disapproving the action of the Governor of that State in appointing Dr Geo I Garrison, of Wheeling, to fill a vacancy in the State Board of Health, on the claim that such appointment was in violation of "the letter and spirit" of the law defining the qualifications required for eligibility for membership in such Board We have received from Dr Garrison a copy of the Wheeling *Daily Register*, of August 18th, 1887, containing the Governor's reply to the charges made against him, from which we copy all that relates directly to the question of violation of the law in appointing Dr Garrison as a member of the State Board of Health It is as follows

"What the objections are to Dr Garrison's appointment the resolutions do not disclose, but I have ascertained from members of the Society that they are,

"First—That he had not practiced medicine the required time—twelve years—before his appointment

"Second—That he received his diploma from a medical college after one course of lectures, instead of two

"Until 1881 there was no law in this State regulating the practice of medicine, and neither examination nor diploma was required of the practitioner

"The following is the law applicable to this case

"'1 There shall be a State Board of Health in this State, consisting of two physicians residing in each Congressional district thereof, who shall be graduates of reputable medical colleges, and who shall have practiced medicine for not less than twelve years continuously They shall be appointed by the Governor, and hold their offices for the term of four years, unless sooner removed as provided in this chapter But the members of said Board now in office shall, unless removed therefrom, remain in office until their successors are appointed and qualified'

"From the evidence before me, and of which I have no doubt, Dr Garrison had been practicing medicine for six years before the passage of the Act of 1881, but was not at that time a graduate of any medical college

"In June, 1881, he appeared before the State Board of Health, was duly examined, and thereupon a certificate was issued in due form authorizing him to practice medicine

'Dr Garrison attended the Fall and Winter Course of Jefferson Medical College, 1885-6, was admitted into the senior class and was graduated as Doctor, in April, 1886"

The exact facts, then, as presented by the Governor himself are, that Dr Garrison had practiced medicine in the State of West Virginia, six years prior to June, 1881, but without having attended or graduated in any medical college In June, 1881, he was examined and licensed to practice medicine by the State Board of Health In 1885-6, he attends one course of lectures at a medical college, and graduates at the close of the session, in April, 1886 In 1887 he is appointed by the Governor a member of the State Board of Health Therefore, according to Governor Wilson, six years' practice without either license or diploma, five years with a license from the State Board, and *one* year with a diploma from a medical college, is equivalent to being "a graduate of a reputable medical college, and in the practice of medicine for not less than twelve years continuously" It is not surprising that the members of the State Medical Society should differ from the Governor in this interpretation of the law We claim to know nothing concerning the qualifications of Dr Garrison, any more than we do concerning those of Dr H V Ferrell, of Williamson Co, who was recently appointed by Governor Oglesby a member of the Illinois State Board of Health

THE INTERNATIONAL CONGRESS —Before another number of THE JOURNAL reaches all of its readers, the Ninth International Medical Congress, of Washington, will have completed its sessions, and its work have passed to the hands of the historian It is not for us to predict what the character of the work will be, but we have the satisfaction of knowing that, through the faithful work of the Executive Committee and the untiring zeal of the Local Committee of Arrangements at Washington, every preparation has been made for the accommodation and entertainment of an International gathering of medical men equal in numbers and in scientific and professional achievements, to any that have preceded it

ALL THE CONDUCTORS on the Maine Central Railway have been provided by the management of the road with cases containing all the remedies to be used in cases of accident, such as linen and rubber bandages, plaster, surgical instruments, medicines, liniments, etc, with books of directions Every conductor will be his own doctor The occasions are frequent also in times of accident when physicians are passengers upon trains, but they are often handicapped by lack of proper instruments A further step in the right direction would be to have all trainhands and employes instructed in "aid to the injured"

ASSOCIATION OF AMERICAN MEDICAL EDITORS —The officers of this Association, in accordance with a resolution adopted at the last annual meeting, have completed the arrangements and will give an elegant Banquet to the medical editors from other countries, on Monday evening, September 5, at the Riggs House, Washington, D C That it may not conflict with the general Conversazione of the Congress in the U S Pension Hall the same evening, the Banquet will begin at 10 P M

AMERICAN ACADEMY OF MEDICINE —The next Annual Meeting of this Society will be held in Columbian College, Washington, D C, on Saturday, September 3d, at 12 o'clock, M A collation will be served in the evening of the same day at the Arlington House The meeting, though short, will doubtless be one of interest and enjoyment

NATIONAL CONFERENCE OF STATE BOARDS OF HEALTH —The fourth annual meeting of the National Conference will be held at Willard's Hotel, Washington, D C, Wednesday and Thursday, September 7 and 8, 1887, commencing at 10 o'clock A.M

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, April 13, 1887

THE PRESIDENT, JOS TABLER JOHNSON, M D, IN THE CHAIR

DR LACHLAN TYLER read a paper on

DIPHTHERIA AND TRACHEOTOMY

(See page 269)

DR S C BUSEY said that in view of the recent discussion on this subject before the New York Academy of Medicine, he had no desire to open the debate He had nothing new to offer and could only give expression to his opinions and experience Some years ago, when the subject was very elaborately discussed before this Society, he stood almost alone in advocacy of the doctrine of the unity of diphtheria and croup Now, he believed, the doctrine of unity was generally accepted Not only did he accept the doctrine of unity, but he believed that croup, diphtheria and inflammation of the tonsils and pharynx were interchangeable affections This view had been taught by Trousseau, Brettonneau and others, and he thought he had frequently witnessed illustrations of it both in private and hospital practice Recently in one family five cases had occurred The first was a case of pharyngitis in which there was no membraneous formation, nor any local evidence of a diphtheritic character The child was—according to his uniform custom in all such cases—isolated, only the mother and adult sister, who nursed the patient, being permitted to enter the room A few days after the recovery of this child, another child, who had been allowed to remain in the room previous to his first visit, was seized with diphtheria, perfectly marked from the beginning This child died, and subsequently the mother and sister, who had nursed both children, were taken with diphtheria A nursing baby remained with the mother during the first night of her sickness and also had the disease Some years ago, during his service at the Children's Hospital, diphtheria, croup of the larynx and simple sore throats appeared in the same ward, during the same period of time, in a manner which had convinced him of their interchangeability

Diphtheria is not a disease peculiar to large cities, or to dense populations, but prevails with equal, if not greater virulence and mortality in villages and sparsely populated regions It is most prevalent in those regions of country, and in those localities where anginas are most frequent, and at that season of the year when the climatic and atmospheric conditions are most favorable for the production of sore throats, and among those most exposed to such causal influences These considerations favor the view of their interchangeability He believes diphtheria to be primarily a local disease, and that systemic infection, sooner or later, and to a greater or less degree, took place Hence he believed that any sore throat, under favoring conditions, might become diphtheritic For this reason he always isolated cases of sore throat

Clinically, he divides diphtheria into three forms The first is so mild that the constitutional symptoms are very slight or absent The fever is usually very slight and the membraneous formation is generally limited to the tonsils The intensity of the fever is not, however, diagnostic of diphtheria for it is frequently very high in cases of simple sore throat The second form is characterized by marked local symptoms and grave constitutional conditions This is the most prevalent form, and many cases proved fatal The third form comprised those cases in which the patient seemed from the beginning to be overwhelmed with a septic and potential poison, and death is inevitable Such cases seemed to be constitutional from the beginning, and could not be explained upon the theory of local origin

Diphtheria is both contagious and infectious Its contagiousness is limited to the direct contact of the poison with an irritated or inflamed surface, and its infectiousness is certainly less than that of the exanthemata The former property is proven by the well-known fact that physicians in attendance have contracted the disease by the contact of the poison on inflamed surfaces, and the latter is shown by the escape of other members of a household in which there is a case of diphtheria He has probably seen fewer cases of diphtheria than other physicians of equal opportunities This he attributes to the fact that he always isolates cases of sore throat in children, and has always taught his clientèle the importance of prompt and proper attention to the simplest angina He regards all cases of diphtheria, however mild in the beginning, as dangerous, hence at the onset he begins with a vigorous local and constitutional treatment

Diphtheria is characterized by inflammation, the production and absorption of a poison, a membraneous exudation, and the emanation of a poison Except, perhaps in one form, the constitutional symptoms of systemic infection follow the absorption of the poison generated during the progress of the disease

His treatment is both local and constitutional He avoids all injury to the inflamed parts In fact he does not favor the rapid dissolution of the membrane unless it interferes either with deglutition or respiration, but prefers gradual dislodgement of the membrane by warm fomentations or poultices, externally, and warm, alternating with cold antiseptic spray As an antiseptic he prefers carbolic acid Has not used the bichloride of mercury solution He has had no experience with trypsin, but has frequently succeeded in dissolving the membrane with a solution of lactic acid, employed either as a lotion or a spray After dissolving the membrane he had brushed the inflamed surface with the oleate of mercury and at one time believes it prevented the re-formation, but has abandoned the practice because additional experience had satisfied him of its uselessness When the membrane is removed by solution it usually reforms, but when slowly detached by the method stated it does not often reappear Of the constitutional remedies he considers the tincture of the

chloride of iron, a nutritious and sufficient dietary, alcoholic stimulants when needed, quinine in tonic doses, and the chlorate of potassium, in moderate quantity, as the most important The iron is both tonic and antiseptic, the quinine is tonic and antipyretic The chlorate of potassium is dangerous when employed, internally, in large quantities He has no doubt that it may produce nephritis For spraying he employs a carbolized saturated solution of chlorate of potassium He has employed the bichloride of mercury internally, but has lost every patient to whom it was given Many children are lost because of the failure of the nurse to execute the orders of the attending physicians, and by the opposition of the parents If every child suffering from diphtheria could be taken to a hospital and isolated from its parents he thinks many cases would be saved that are now lost

Tracheotomy in cases of diphtheritic croup very often fails because the operation is performed too late Intubation gives promise of greater success

It is not a cutting operation, and even if it does not bring relief it does not preclude the possibility of tracheotomy It can be done early without fear of harm, and it does not necessarily require an expert to perform it Dr Montgomery reports 13 cases of intubation with six successes, a better proportion than tracheotomy would probably give The tube should be small and not fill the lumen of the larynx so that the membrane may be coughed up alongside the tube

To determine the time for operation is most difficult The opinion is now, as it always has been, that the early operation is the most successful, but it is almost impossible to determine the time at which it is an operation of expediency Later it becomes an operation of necessity Perhaps if the rule was to perform tracheotomy immediately on making the diagnosis more cases would be saved In his opinion the operation is indicated as soon as our best efforts fail to remove the membrane This practice cannot, however, be carried out in private practice, because an operation which will not guarantee a success is resisted by the parents until it is too late Recession of the chest wall during inspiration is the usual indication for tracheotomy, but in his opinion that is at too late a period The presence, however, of a false membrane in the larnyx is not always the indication for tracheotomy He recalls an instance where he was called to the Children's Hospital to see a case of diphtheria When he arrived he found the surgeon just about to perform tracheotomy He declined to permit it, but gave an emetic of turpeth mineral The membrane was detached, and the child got well

Dr Swan M Burnett thought that it was well to have the opinion of all the departments of medicine upon the subject, and for the ophthalmologists he would speak It is well known that we have a diphtheritic conjunctivis as well as diphtheria of the larynx High authorities in modern ophthalmology have been able to differentiate a croupous from the diphtheritic form of conjunctivitis, and as we have the eye under observation from the beginning to the end of the trouble this duality cannot be disputed The diphtheritic membrane is part and parcel of the conjunctiva itself, and cannot be wiped away In what we call the croupous form the membrane is on the surface and can be easily wiped away leaving a bleeding surface In diphtheria the lids are hard and swollen, red and shiny These conditions are not present in as great a degree in the croupous form The treatment of both is nearly the same although the croupous form is easier to cure Antiseptics play an important part in this At one time a strong solution of nitrate of silver was used in Germany, but the treatment is not now so heroic Luckily the diphtheritic form is rare in this country, and he has himself never seen a case of it

Dr Busey said that what Dr Burnett called croupous membrane was not diphtheritic but a simple exudation

Dr Burnett replied that it is only in recent years and after the most careful research that the difference between the two membranes was discovered, and their characteristics well proved

Dr J W H Lovejoy believed with Dr Busey that diphtheria was at the beginning a local disease, which in a short time becomes constitutional, and should be treated as such A few months ago he attended a child with a diphtheritic membrane over the soft palate and naso pharnyx He gave at once iron and chlorate of potash both internally and as a gargle, and in addition lime water applications both day and night The membrane, however, increased, and he resolved to try trypsin He dissolved 30 grains of trypsin and 15 grains of bicarbonate of soda in an ounce of water, and ordered the throat to be sprayed with that every hour, meanwhile keeping up the other treatment After a day's use of this spray he was astounded to find that nearly the whole of the membrane had disappeared He considers the happy termination of the case was due to the fact that the trypsin dissolved the membrane and thus allowed the gargle to reach the throat He thinks that an inflamed throat forms a suitable midus for diphtheritic infection Ten years ago he was attending a case of diphtheria, and upon going out of the house in a heated condition he took cold In two days he discovered a diphtheritic patch upon his tonsil, and he was quite sick with the disease He has not for many years used irritating substances to the throat, but has relied chiefly upon iron and chlorate of potash He is also opposed to any surgical interference In a case in which there was a copious deposit of membrane and great difficulty in swallowing, he was advised by a consulting physician to remove a small portion of the uvula which was much swollen This he did, but in a few hours the membrane was over the raw surface and the child died From this, and the reports of other successful cases from the use of trypsin, he would recommend that article for a fair trial

Dr M Murray said that diphtheria was certainly a local disease at first He has seen Storck on three occasions remove a diphtheritic membrane with a brush, and paint the denuded surface with a solution of bichloride of mercury, and the membrane had never returned

DR L TYLER did not believe that the lack of oxygen was the principal indication for tracheotomy, as we can supply that by giving inhalations of it The effect is not, however, the same as from tracheotomy Those cases in which it is difficult to decide whether the disease is local or general are the exceptions which "prove the rule" of its local origin He prefers to use quinia in small tonic doses, to large antipyretic doses As antipyretics he would prefer to use either cold or antipyrin, the latter only when there is no great depression of the vital forces He uses in his paper the term "precautionary tracheotomy" by which he means an early operation, and so far as he knows the expression is original

He considers tracheotomy one of the easiest operations in surgery, but the trouble is we delay it until it is often too late Thus a dread of the operation has been engendered among the profession and the laity from the number of fatal cases, which are due to the disease and not to the operation Tracheotomy of itself is not a dangerous operation as it does not kill when done for other reasons than for diphtheritic stenosis In on operation which he did the child was already *in extremis* He etherized and opened the trachea, and the patient was somewhat relieved, but it died on the table Another case he saw in the morning and was convinced that tracheotomy was needed, but he had not the courage of his convictions, so he put it off a few hours until he could obtain a consultation At the end of that time the membrane had spread so extensively and the constitutional infection had become so profound that an operation would have been useless and was therefore not performed

DR J FORD THOMPSON said that he was surprised to hear Dr Tyler call tracheotomy an easy operation For his part he had studied the subject carefully and has done many operations, yet he feels as much trepidation on beginning the procedure to-day as he did at first He does not think that tracheotomy for diphtheria is comparable with tracheotomy for any other condition, nor is the operation as difficult on adults as on children There is scarcely a fatal case of which it is not said that the operation was done too late It is his custom never to operate on a case that can be saved by other means, and in one winter he saved four children that were almost moribund when he began the operation It is said that the early operation saved more children than the late This may be so, for it is probable that many cases would have recovered without the operation He has had but one case die on the table Merely opening the trachea is not going to stop the disease but it allows the child to get air and tide over the height of the affection The best indication for the operation is stenosis of the larnyx, and this symptom we do not get when we operate early

The new operation of intubation seems to offer great advantages It can be done early, it is free from the shock of tracheotomy, and above all it does not preclude opening the trachea at a later period It is not yet proved that it can supersede tracheotomy, but he intends giving it a trial at the first opportunity He is not going to give up tracheotomy because of many unsuccessful cases Anæsthesia is not always advisable for the operation as it adds a complication, and besides many cases are so far gone as practically to have no feeling Medicinal treatment has made no advances After much arguing we have come back to the old style of treatment

Practically and clinically speaking a distinction between croup and diphtheria is of no value He has seen cases in the same family some of which looked like croup and some like diphtheria, there may be a difference but he does not think so Where the glands are swollen in either case tracheotomy is less favorable

DR BUSEY said that he more often used quinine in tonic than in antipyretic doses He admits that antipyrin is a better antipyretic than quinine, but owing to the depression which it is likely to cause it is not so applicable to diphtheria as to fevers Dr Thompson says that tracheotomy is not a curative operation and then intimates that he does not believe in medicines The operation admits air which is certainly curative to a limited extent, and this, if for no other reason, justifies the operation From what he says one would suppose that tracheotomy is practically a hap-hazard procedure, he does not supply the symptoms indicating its necessity, nor does he tell us when it becomes imperative There should be some scientific basis for its performance, and there should be some other reason than that of a mere *dernier ressort* At what time is the operation practicable? When we have agreed upon this we will have gained much Some surgeons, as soon as the operation is done, abandon all medicinal treatment, which it is most important to continue and would probably save many cases The croupous membrane which Dr Burnett describes is not a membrane but a pultaceous semi-fluid exudation

DR THOMPSON did not give the indications for tracheotomy as they are well described in the books A depression of the epigastrium below the sternum, and not of the intercostal spaces, is the proper indication for tracheotomy The depression of the intercostal spaces is a later and coarser symptom When he says the operation has no curative effect, he means that it will not stop the spread of the membrane Diphtheria has a self-limited course to run and the longer we put off the fatal issue the greater the chance of recovery From this standpoint tracheotomy is curative It is said that an acute case of diphtheria never gets well after tracheotomy, that a subacute case has a better chance and that a chronic case has the best chance of all The early operation is not curative Every year we have a new remedy which is put forward as a specific, but after a trial we have returned to the old fashioned iron and chlorate of potash mixture

He invariably gives his patient both local and general treatment He uses a large antiseptic spray, with tonics, nourishment and stimulants In his opinion the early operators will, in the long run have a smaller percentage of deaths than the late operators, but they will have performed many unnecessary operations

DR BURNETT remarked that there could be no

doubt as to there being a croupous as well as a diphtheritic membrane in the eye This has been the outcome of many observations by careful observers

Dr J B Hamilton said that the contra indications for tracheotomy were of importance as regards the relation between physician and surgeon In one case which he had been called to operate upon he found a double pneumonia and a capillary bronchitis Considering that the patient was certain to die he refused to do the operation as it would simply bring discredit to the profession The invasion of the larynx is, in his opinion, the indication for operation The operation itself may be fatal when it is followed by pneumonia or bronchitis Hæmorrhagic cases are not relieved by the operation There are some cases in which the hæmorrhage is from the back of the nose that are temporarily relieved by tracheotomy, but death from exhaustion is apt to ensue This complication he thinks is a more common one than is generally supposed He regards the operation as one of the most trying ones in surgery

Dr L Tyler in closing said that Dr Thompson's remarks show that he is in the foremost ranks of one class of thinkers He could not agree with him that tracheotomy was a difficult operation, and without admitting the possession of any special cut-throat proclivities he thought it a most fascinating one While pneumonia following tracheotomy is a remote possibility the very possibility is an indication for an early operation before the lungs have become so congested as to make its sequence more probable We must understand that the operation is a curative one As a *dernier ressort* it may only be productive of euthanasia and anticipatory of a fatal issue from asphyxia Properly speaking there is no such thing as the *croupous* membrane mentioned by Dr Burnett, but rather a *diphtheritic* membrane Croup is a *symptom* of diphtheria, and, in his opinion, the amount of membrane depends upon the extent and degree of the inflammation He agrees with Dr Lovejoy in the opinion that exposure to cold is a cause of diphtheria and he thought he had been able to trace cases to this origin Dr Fernald, in his paper at the previous meeting, had given a strong argument in favor of trypsin as a solvent of the membrane and he would join in recommending its use upon the strength of the results which he had experienced in his case of aural diphtheria

FOREIGN CORRESPONDENCE

MUNICH [1]

The University—Over crowding in the Profession—Doctors and Rich Wives—Nussbaum, his Work—Extirpation of Struma—Ovariotomy—Winckel—Perineo Plasty—Angerer—Excision of Knee for Tubercular Osteo Myelitis—Heidelmeyer

Dear Dr Fenger—When I arrived in Munich I felt at home, as I attended lectures here during the year 1878 I remained for a whole week, and during this time saw many interesting cases with my former teacher of surgery, Professor Nussbaum, and Professors Winckel and Angerer The Allgemeine Krankenhaus has undergone no change for the better since I attended before The University in this city now numbers 1100 medical students Considering the number of universities in Germany and the large number of students in attendance almost everywhere, it becomes a serious question what is to become of these young men after their graduation The country is now more than supplied with physicians, and if the increase continues for a number of years in the same ratio it is difficult to conceive in what way the medical men are to earn their daily bread

The German government is well aware of the prevailing evil that too many graduates of the gymnasia choose the medical profession, and has taken steps to lead them into other channels by calling their attention to the existing evil through the columns of the public press Only a few days ago Professor Hegar, of Freiburg, informed me that unless a decided change occurred in this direction the medical profession would soon degenerate into a "proletariat" It is well known that even at the present time, in some country towns, doctors will make visits, and even supply the necessary medicine, at half a mark An ignorant "Dienstmann" would look with scorn at anything less than this for carrying your valise from the depot to the hotel We have many cheap doctors in America, but their fees must be considered as royal when compared with such a beggarly sum There is great danger that the same condition will prevail in America at no distant time, unless the medical colleges adopt timely measures to prevent over crowding of the profession by elevating the standard for admission to the study of medicine as well as graduation Nothing will degrade the profession so quickly in the eyes of the public as over crowding In the struggle for an existence men will resort to ways and means which they know are wrong

It is quite a fashion in Europe, among medical men, to marry rich wives in order to keep the wolf from the door, but in my judgment such a course only aggravates the social and professional standing, as wealth acquired in such an easy way brings obligations which are antagonistic to scientific advancement. Unless a man acquires wealth by his own efforts he will seldom find his way into the front ranks of the profession It is better for a man to remain poor as long as he lives, and labor honestly and perseveringly in the interests of his chosen profession, than to be constantly handicapped by a rich wife or her many relatives It is seldom that a rich woman has the good sense to satisfy her ambition in promoting the scientific attainments of her husband, her interests are usually outside of the things that pertain to the profession Only too often her greatest, yes, her only desire is to become a conspicuous figure in society, and as she cannot attend the balls, receptions and theatres alone, the man who married her for her money must do at least what he can to make her happy, and must go along In this way perhaps six evenings in the week are spent, and

[1] By permission of Drs Fenger and Senn.

the books and medical journals, if money is spent for such things, become covered with dust

That this picture is not overdrawn you can verify in your own city, where many of the richest doctors, who ought to occupy prominent positions among their colleagues are not known outside the small circle of friends and acquaintances where they are tolerated only on account of their wealth Science is making such rapid strides that its devotees have absolutely no time for the doubtful pleasures which society can offer The good standing and purity of our profession can only be maintained by admitting into its ranks only men with natural adaptations and an innate love and devotion for the advancement of medical science and its collateral branches

Contrary to several reports that I had received, I found Professor Nussbaum in tolerably good health, and attending to his duties in the hospital with the same regularity and enthusiasm as nine years ago To those who have known him for many years his present condition is a mystery During the Franco-Prussian war he suffered from coxitis, which left one of his hip joints in a contracted anchylosed condition, and since then he has had the misfortune of fracturing several of his bones, and yet after so much suffering and confinement he retains his mental vigor and works with the same enthusiasm as years ago Physically crippled, mentally he is a giant To follow such a man in his work for a few days ought to be enough for any man to stimulate him to follow such an illustrious example Nussbaum has been a hard worker all his life time, and his work bears the stamp of originality His enthusiasm carries him sometimes too far, and yet these extremes have often been productive of a great deal of good He was one of the first apostles of antiseptic surgery in Germany, and his little book (Leitfaden der antiseptischen Wundbehandlung) went through four editions, and did more towards the general adoption of antiseptic principles in the treatment of wounds than all the rest of the German literature combined, but he is familiar, at the same time, with the American and French authors and writers His lectures are always interesting and fascinating, and the lecture room and operating theatre are always crowded with students

During the time I remained in Munich I had the good fortune to see him perform three capital operations, which I will briefly detail The first was an extirpation of a struma The patient was a girl 25 years of age, who had noticed an enlargement of the neck when she was 14 years of age The swelling gradually increased in size until, for the last year, it has given rise to a great deal of discomfort, at times giving rise to suffocating sensations The tumor was about the size of a hen's egg, located directly over the trachea In his remarks on the operation attention was called to the serious consequences which have followed complete extirpation of the thyroid gland as described by Kocher under the title of *cachexia strumi priva*, as well as the results which have been obtained by experimental research It was also stated that since complete excision has been abandoned tetanus had also disappeared from the statistics of struma operations Kocher's incision along the anterior margin of the left sterno cleido mastoid was made, and the tumor well exposed Until the capsule was reached layer after layer was carefully divided and all hæmorrhage arrested With blunt instruments the base of the tumor on each side was reached, and the parts containing the large vessels isolated into sections, and divided between two ligatures By resorting to these precautions the operation was rendered almost bloodless The trachea was found somewhat compressed, but sufficiently firm to retain its shape after the removal of the tumor In cases in which the trachea has become so compressed and atrophied from pressure that after the removal there is danger of suffocation from sudden collapse or flexion, he resorts to amputation of the middle portion of the tumor over the trachea with Paquelin's cautery, so as to leave the part which supports the weakened portion of the trachea Portions of both lateral lobes were left in this case The cavity was filled with iodoform gauze and the skin partially united The iodoform gauze tampon was intended for drainage, and was removed the next day, and the wound at this time was more carefully sutured

The second case was an ovariotomy on a patient 67 years of age The tumor had been noticed two years ago, but had increased in size rapidly for the last few months The abdomen was moderately distended, fluctuating, uterus high, but in the pelvis a number of hard nodules could be felt Attention was called to the difficulty of differentiating in some cases between ascites and ovarian cyst In very obscure cases a positive diagnosis is only possible by an exploratory incision During the operation the temperature of the room was at least 95° F, which made not only the operator but all the students perspire freely The abdomen and pubes were shaved and thoroughly disinfected the day before, and kept covered with a compress saturated with a carbolized solution The abdominal incision was at least four inches in length The tumor was tapped with a large straight trocar and drawn forward into the wound with forceps, and rapidly emptied by incision and crushing of smaller cyst with the hand introduced through the opening The pedicle, broad and fleshy, was compressed with Helferich's constrictor, and the groove made tied with strong double catgut strings, below this point the pedicle was transfixed and tied in two parts, also with catgut Above the first ligature the pedicle was again forcibly compressed between the blades of Langenbeck's forceps and burned off with Paquelin's cautery The cleansing of the peritoneal cavity was done with large, soft sponges wrung out of a warm solution of carbolic acid The abdominal wound was closed with a double row of chromatized catgut sutures and a typical Lister dressing applied

All students are here admitted to laparotomies, and as the balcony above the operating table is usually crowded, it is remarkable that so few of the patients die of septic peritonitis

The third case was another case of ovariotomy, also in an aged person The tumor had been tapped

twice, and each time a large quantity of fluid removed After each tapping a hard mass could be felt in the pelvis The abdominal incision was again made long and led directly into the cyst, as the latter was firmly adherent It took some time to find the point where the two surfaces were adherent The adhesions were separated rapidly, and no attention paid to the oozing which occurred The hard masses which had been felt in the pelvis after tapping proved to be smaller cysts, which were ruptured with the hand introduced through the opening made in the principal cyst As the tumor had no adhesions in the pelvis, it could be readily brought out through the abdominal wound The pedicle was treated in the same manner as in the previous case

Two days later both patients were doing well As the surroundings under which Nussbaum operates are by no means calculated to protect the patients against infection, we must attribute his good results to the careful antiseptic precautions which he follows before and during the operations and the manual dexterity which he has acquired after such a long and extensive experience in abdominal surgery

A good deal of my time in Munich was spent in the lecture room and wards of Professor Winckel Professor Winckel is well and favorably known by his works on gynecology and childbed fever, as well as by his numerous valuable contributions to medical journals and society transactions He organized the German Congress for Gynecology and was elected as its first President He made an extensive tour through the United States and Canada last year, where he made valuable personal acquaintances He is one of the leading gynecologists on the Continent, and has a better and more intimate acquaintance with the literature of his specialty than any other specialist He is now writing a text book on obstetrics, which will undoubtedly take the place of the most popular text-book on the same subject written by the lamented Carl Schroeder Professor Winckel has been a teacher almost since his graduation, and many of his pupils only a few years younger than himself are now distinguished surgeons and physicians I was astonished when he told me that Professor Schoenborn, now of Wurzburg, was one of his pupils, as the latter looks much older than his teacher Winckel is a systematic worker, and never fails to make good use of his vacations to benefit his bodily health, and this undoubtedly explains his excellent physical condition He is a great traveler and a most accurate observer He is a hard student, a pleasant and forcible writer, a fascinating and enthusiastic teacher, a splendid diagnostician, and a brilliant and beautiful operator He is a most valuable member of the Faculty, and will make his department one of the most attractive and successful in Europe In his obstetrical wards the most scrupulous cleanliness prevails, and wherever necessary full antiseptic precautions are practiced, consequently indigenous cases of sepsis are almost unknown His laparotomies are attended only by a few students, who must give proof that they have not been recently exposed to septic germs I witnessed an ovariotomy in his wards which was done under strict antiseptic precautions and with a neatness and dispatch which would be difficult to excel The patient recovered without a single untoward symptom

His private course on operative gynecology is unsurpassed by anything of this kind The entire organs of generation of the female are removed from cadavers, preserved in an aqueous solution of corrosive sublimate and kept ready for use The soft parts are placed in a Schultze's phantom and attached in such an accurate manner that the normal relations are preserved On such specimens the student is required to perform all the more important operations in gynecology under the immediate supervision of his teacher Some of the students assist in the operations When I was present the students were all arranged around three tables with as many operators, while Professor Winckel walked from place to place and directed the work All teachers of gynecology should imitate this method of teaching, as it is the only way which will furnish adequate material for the different operations, and which will familiarize the students with the details of the most important operations

I was very much interested in a case of perineoplasty which I witnessed The laceration had extended into the rectum, and after vivifying the retracted margins of the rectal tear, coaptation was secured with silkworm-gut sutures passed through the entire thickness of the recto-vaginal wall and tied on the vaginal side The perineum was sutured with the same material after Hegar's plan Professor Winckel has performed this operation in many cases in this manner, and has never observed a recto-vaginal fistula after the operation The recto-vaginal sutures are allowed to remain for several weeks

Professor Angerer is the successor of Professor Helferich now of Greifswald, and has charge of the polyclinic in the Reisingerianum The operating room holds about 100 students, and is daily crowded from 11 to 12 A large clinical material collects here, and many important operations are performed, as the institution contains a few beds where patients can remain for a limited length of time Angerer is a good lecturer and an expert operator

Among a number of operations that I saw here I was most interested in a case of excision of the knee-joint in a little boy suffering from tubercular osteomyelitis of the inner condyle of the femur, and consecutive fungous synovitis of the joint On a previous occasion a tubercular spot had been removed from the inner tuberosity of the tibia The joint was opened by a transverse incision and division of the ligamentum patellæ When the patella was reflected it was found that the primary focus in the tibia had not healed, but had extended into the joint, the internal condyle on opposite side of joint was the seat of a similar depot, also in communication with the joint But the most remarkable condition was seen in the joint and recesses underneath the patella and quadriceps muscle Only half of the joint was the seat of infection and secondary fungous proliferation, as the remaining portion of the joint, corresponding to the external condyle of the femur and the external tuberosity of the tibia, remained in

a perfectly healthy, intact condition, being separated from the diseased portion by a partition of firm connective tissue This is the condition which had been described to me by Professor Koenig a few weeks before, in which nature makes an attempt to localize the extension of tubercular processes, even in joints, by throwing out a wall of cicatricial tissue Portions of the condyle and tuberosity were removed with the saw, and the healthy portion of the joint was left intact The tendon of the patella was sutured and the wound closed, except at points where bone was removed, where tubular drainage was established A copious dry sublimated dressing was applied and the limb placed upon a posterior splint

I suggested to Professor Angerer after the operation that, under similar favorable circumstances, it would be advisable to split off the remaining portion of the internal condyle to draw it downward until it could be brought in apposition with the head of the tibia, where it could be retained with one or two aseptic bone-nails Such a modification would secure a better support for the tibia, and prevent a tendency to the formation of a genu valgum during the reparative process

Professor Angerer drills his students thoroughly in surgical diagnosis, and makes them familiar with important details which are usually ignored in the larger clinics In connection with the polyclinic is a small laboratory where, under the direction of Professor Angerer, bacteriological studies are made and specimens from the clinic examined under the microscope It is such a laboratory as I have urged should exist in connection with every chair of surgery, for the purpose of developing and teaching surgical pathology Mr Heilmeyer, who works in this laboratory, is an expert in preparing and mounting specimens, and as the sale of his slides is his principal source of income, he deserves the patronage of all who wish to promote the welfare and happiness of an humble but devoted promoter of the science of medicine

During my stay in Munich I enjoyed the hospitality and friendship of Professor Winckel, and I fear I shall not be able to reciprocate his kindness unless he undertakes another tour through the United States, an event which would be looked for with pleasure by a host of his American friends N SENN

LETTER FROM VIENNA

(FROM OUR OWN CORRESPONDENT)

Etiology and Treatment of Asthma caused by Polypi and Catarrhs—Dr Pawlik—Dr Ehrendorfer

At the last meeting of the Vienna "Doctoren-Collegium" Regierungsrath Prof Schnitzler made a valuable communication on the etiology and treatment of asthma He above all wished to direct the attention to those cases of asthma which were caused by polypi of the nose and by nasal catarrhs, and which had been neglected for so long a time Diseases of the nose were a frequent cause of asthma, and in most of cases polypi of the nose, and among these especially mucous polypi, gave origin to bronchial asthma Often already a simple chronic nasal catarrh was a sufficient cause for producing asthmatic disturbances of a high degree These disturbances, however, did not develop owing to narrowing or obstruction of the nasal cavities, and neither by the continuation of the catarrhal inflammatory process to the mucous membrane of the nose or the pharynx, etc , as was suggested by some authors They were of a reflex nature, and due to the irritation of the nasal branches of the fifth nerve, and sometimes also the olfactory nerve, which, on the other hand, produced a reflex irritation of the vagus and the phrenicus nerves This irritation produced the bronchial asthma with all its known symptoms Hence, according to the opinion of Prof Schnitzler, the asthma was an innervation disturbance of the respiratory process, being produced by reflex, and the asthma resulting from polypi of the nose or chronic nasal catarrhs was particularly to be looked upon as a reflex neurosis taking its origin in the nasal nerves The reflex irritation of the vagus first led to a spasm of the bronchi, which was in most of cases also followed by a spasm of the diaphragm owing to the irritation of the phrenicus At the same time vasomotor disturbances of the respiratory organs supervened—hyperæmia and augmented secretion of the bronchial mucous membrane—and the complex of the symptoms met with in cases of asthma was complete But all the nerves mentioned above were not irritated in all cases of asthma, and all the organs which depended on them were not always affected either, sometimes the vaso motor disturbances, and in other cases the spastic conditions, prevailed, and this fact accounted for the different explanations of the nature of asthma, each of which was justified, according to the opinion of Prof Schnitzler

Prof Schnitzler then discussed the treatment of bronchial asthma, and especially that which was produced by polypi of the nose and nasal catarrhs, at full length In cases of polypi of the nose, he had always obtained recovery of the asthma by removing the polypous affection, either by operation or by galvano caustic treatment Before the asthmatic attack, he had often been able to cut it short by brushings of the nasal mucous membrane with a from 5 to 10 per cent solution of cocaine He had also obtained good results with the administration of the iodide of potassium in combination with chloral hydrate During the attack, chloral hydrate (administered by the mouth or by means of clysters), and injections of morphine proved as the proportionately most efficient agents, but their effect was nevertheless not so constant as had been stated by some authors The fumigations with saltpetre, stramonium, pyridin, etc , proved in some cases to be efficient, in others they failed to do so As to amyl nitrite, the nitrate of silver, and nitroglycerine, they had a better effect in cases of cardial asthma than in bronchial asthma Prof Schnitzler passed an interesting and critical review of all the remedies which had been recommended in the treatment of asthma—the agents for precipitating the secretion, the climate, and pneumato therapeutics, etc, and objected to the efficiency of most of them, a fact which is very plausible, considering that the known Vienna laryngologist was

educated in the nihilistic Vienna school of Skoda and Oppolzer, of whom he is one of the worthiest disciples

Dr Pawlik, Docent of Obstetrics and Gynecology in the Vienna Medical Faculty, has been elected an ordinary Professor of these subjects at the Medical Faculty of Prague, (with Bohemian language) [There are in Prague two Medical Faculties, a German and Bohemian one]

Dr Ehrendorfer, late Assistant of Prof Spaeth in the chair of Obstetrics and Gynecology, has been named as ordinary Professor at the Medical Faculty of Innsbruck (in Tyrol)

LETTER FROM PARIS

(FROM OUR OWN CORRESPONDENT)

Cocaine in Staphylorrhaphies and Plastic Operations—Retention of the Placenta after Miscarriage

Dr Ehrmann, of Mulhouse, Corresponding Member of the Paris Academy of Medicine, proposes the employment of cocaine as an adjuvant in certain staphylorrhaphies, whether simple or complemental After having related the cases that came under his notice, Dr Ehrmann concludes that the analgetic effect determined on the soft palate by a solution of cocaine is scarcely more than superficial, and that this local anæsthia, really precious for certain cases can never replace chloroform in palatoplasty, nor even in staphylorrhaphy properly speaking, complete, in that which necessitates muscular sections, or detachments of the palatine bone The cases where, in congenital fissures, the division is practised on only one portion of the soft palate where therefore a simple apposition is sufficient for union, these cases are assimilable to complemental or partial staphylorrhaphies, but they are very rare In 50 subjects on whom Dr Ehrmann performed plastic operations on the palate for congenital divisions, he met with only two who presented this arrangement

In a very interesting paper by Dr Budin, an Agrégé of the Faculty of Paris and Hospital Accoucheur, which was read before at the Academy of Medicine, on the retention of the placenta after miscarriage, the author, in response to discussions which have lately taken place at various learned societies observed that two principal complications may supervene in these cases, hæmorrhage and septicæmia Against these accidents, the question is asked, whether manual and instrumental intervention are rational or necessary To accept these hypothesis, it must be demonstrated 1 That the retention of the placenta is really a source of frequent accidents 2 That all digital and instrumental manœuvres which are resorted to in such cases present any danger

To the first question, Dr Budin responds by using facts observed by him at the Charity and at the Maternity Hospitals Of a total of 210 cases of miscarriage (57 at the Charity, 153 cases at the Maternity) there were 46 cases of retention of the placenta, or 22 per cent At the Charity there were no cases of hæmorrhage, at the Maternity 2 cases of slight hæmorrhage occurred at the moment of the removal of the placenta. Septic accidents were almost nil There was only one death, that of a woman who entered the Maternity with bronchitis and fever, and in whom after a miscarriage the placenta was expelled after 60 hours and the patient died of intercurrent pneumonia 15 days after the miscarriage Therefore, of 210 cases of miscarriage accompanied 46 times by retention of the placenta, there was only one death the cause of which could hardly be imputable to the miscarriage As regards digital, instrumental or other manœuvres, they are inefficacious or dangerous Different accoucheurs have observed severe hæmorrhages, endometritis, pelvic abscesses and even death resulting from interventions of this kind Expectation and antisepsy are recommended in these cases A B

NECROLOGY

JOHN WADHAMS RUSSELL, M.D

John Wadhams Russell, of Mount Vernon, Ohio, was born in Canaan, Litchfield County, Conn , on January 28, 1804 His father, Hon Stephen Russell, was repeatedly elected a member of the Connecticut Legislature, and his grand father, Jonathan Russell, commanded a brig under General Lafayette's letters of marque in 1778 Dr Russell's mother was Sarah Wadhams, of Goshen, Conn His education until his thirteenth year was received at the common schools of Litchfield, whither his father removed in 1808 Then he was sent to Morris Academy, and under Rev Truman Marsh pursued his studies and was prepared for, and admitted to Hamilton College in 1821 He pursued his classical studies with the Rev Mr Langdon, of Bethlehem, Conn , one year, as his impaired health would permit, and in the fall of 1823 went South He took charge of an academy at Red Bank, Colleton District, S C , six months and there commenced his professional studies with Dr Sheridan, a scientific and noble hearted Quaker Returning to Connecticut he attended the Medical lectures at Yale College one course, and then going to Pittsfield, Mass , there attended the lectures in Berkshire Medical College Subsequently, going to Philadelphia, he was a private pupil of Dr George McClellan, and was graduated from Jefferson Medical College in 1827 Returning to Litchfield he there began the practice of his profession, and remained there for one year, during which time he delivered a course of lectures on anatomy and physiology to a private class of young men In 1828 he removed to Ohio, and began practice at Sandusky City, where he remained but a few months, when he moved to Mount Vernon, in Knox County He was a delegate to and member of the Centennial International Medical Congress which met in Philadelphia in 1876 At this meeting of the International Medical Congress Dr S D Gross said, "it gave him great pleasure to introduce to his medical brethren, his esteemed friend and classmate Dr Russell whose extreme modesty *alone* prevented him from being the leading surgeon of the land "

In 1828 Dr Russell married Eliza, daughter of the Hon William Beebe, of Litchfield, Connecticut

She died in 1871, having been the mother of five children In 1872 Dr Russell married, in San Francisco, Ellen M Brown, daughter of Joseph Brown, Esq She died on October 14, 1879

Dr Russell was a man of indefatigable industry During his life he probably performed more physical and mental labor than the majority of his contemporaries, in or out of the profession His work did not begin with the rising or close with the setting sun, and the day usually allotted to rest found him actively engaged In his early practice he visited his patients on horseback While on a professional trip near Gambier in 1836 his horse fell on the ice and injured his knee-joint, which resulted in false anchylosis and compelled him to use a crutch afterwards For a like disability many would have abandoned an active practice, but with him it had no effect, only to intensify his zeal and change his mode of travel Mules were called into requisition, and with two of these animals and a carriage he scaled the hills of Knox and the adjoining counties for half a century During the 60 years of his professional life, his instruction was sought by not less than 300 young men preparing to enter the medical profession He was a most capable and thorough office preceptor He imparted instruction to his pupils by recitations, dissections, demonstrations, and oral instruction, and by his own exemplary conduct taught them medical ethics He elicited the profound respect and admiration of his pupils, and inspired them with enthusiasm in their studies In his journeys to his patients he would take a student, and his text-book, conduct the recitation *en route*, and when darkness or other causes intervened no time would be lost, for now came the memorable quiz over past work, and for which he was truly famous That his office was an uncomfortable place for a lazy student, and that the doctor had no patience with a man who would not work his brain is shown by an extract from a letter to the late Dr William Morrow Beach, of London, O "For fifty-nine years it has been my happy lot to serve the afflicted conscientiously, faithfully, and I wish I might add judiciously This I cannot always say I have prayed for wisdom, and would advise the same to my juniors The great sin in our profession is *indolence* A man is responsible not only to do as well as he knows, but to use his faculties to know what to do"

It was in general surgery that he took most interest, and found most pleasure He regarded anatomical knowledge as the true basis of all success and skill in surgery Living in a county where it is necessary to be a general practitioner in medicine and surgery, he performed most of the so-called capital operations, such as lithotomy, herniotomy, and all the most important amputations, except that of the hip-joint, and many of the more delicate operations as that for cataract, etc, and with almost uniform success He was careful to keep pace with the advances of medicine In all matters he faithfully followed his convictions of duty regardless of the sacrifice of self which such a course might require He was tendered the Professorship of Surgery in several Medical Colleges, but declined them all, preferring to remain in private practice He was an active Christian, ever ready to perform those duties which the love of Christ developed upon him He had an hypertrophied prostate for eighteen years, the pain and other resulting inconveniences of which he bore with fortitude and without a murmur Retention of urine and uræmia caused his death on March 22, 1887, at the advanced age of 83 years He died as many had predicted, "in the harness," having prescribed for patients up to within forty-eight hours of his death

F C L

INTERNATIONAL CONGRESS.

SECTION OF LARYNGOLOGY

This Section will meet on Monday, September 5, 1887, at 2 o'clock P M

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German Secretary—Dr Ottaker Chiari, Vienna, Austria

French Secretary—Dr E G Moure, Bordeaux, France

DISCUSSIONS

The following subjects have been selected for special discussion

1 The Diagnosis and Treatment of Catarrhal Disease of the Antrum of Highmore To be introduced by Dr Lennox Browne, London, Eng

2 Epistaxis To be introduced by Prof E Fletcher Ingals, Chicago, Ill

3 The Treatment of Laryngeal Papillomata To be introduced by Prof W E Casselberry, Chicago, Ill

4 Recurrent Hæmorrhages of the Upper Air passages Introduced by Dr Wm Porter, St Louis, Mo

5 The Diagnostic Differentiation of Recent Tuberculous, Specific, and Rheumatic Laryngeal Disease Introduced by Dr E L Shurly, Detroit, Mich

PAPERS

MONDAY, SEPTEMBER 5—FIRST DAY

Section meets at 2 o'clock, P M

F B Eaton, M D, Portland, Oregon The present Status of the Galvano-Cautery in the Treatment of the Diseases of the Upper Air-passages, illustrated by improved Forms of Electrodes and Description of Cases

Richardson Gray, M D, Orange, N J The Galvano Cautery in the Treatment of Diseases of the Nose and Throat, with description of perfect Battery

H H Curtis, M D, New York Surgery of the Nasal Septum and Turbinate Bodies

John North, M D, Keokuk, Iowa The Influence of Disease of the Mucous Membrane of the Upper Air passages upon the Sympathetic Nervous System

Richard H Thomas, M D, Baltimore A Contribution to the Causes and Treatment of so called Hay Fever, Nasal Asthma, and allied Affections, considered from a clinical standpoint

I P Klingensmith, M D, Blairsville, Pa. Hay Asthma

D N Rankin, M D, Allegheny, Pa. Some Remarks on the History of Rhinology

J Baratoux, M D, Paris, France Le catarrh naso pharyngien

TUESDAY, SEPTEMBER 6—SECOND DAY

Section meets at 2 o'clock P M

O Rosenbach, M D, Breslau, Germany Ueber nervosen Hustens und seine Behandlung

A W Orwin, M D, London, Eng Lupus of the Larynx

Geo Mackern, M D, Buenos Ayres, Argentine Republic The Earlier Manifestation of Malignant Disease of the Larynx

F Laborde De Winthuyssen, M D, Sevilla, Spain Le sulfure de calcium dans le traitement de la diphthérie

R N Wolfenden, M D, London, Eng Trachecele

Paul Koch, M D, Luxembourg, France Parasites of the Pharynx and Larynx

A Cartaz, M D, Paris, France Some Rare Accidents in Tracheotomy

F Massei, M D, Naples, Italy Primary Erysipelas of the Larynx

WEDNESDAY, SEPTEMBER 7—THIRD DAY

Section meets at 2 o'clock P M

J A Stucky, M D, Lexington, Ky Clinical Report on the Treatment of Laryngeal Phthisis

C M Desvernine, M D, Havana, Cuba The Longitudinal Tension of the Vocal Cords, its Physiology and its Derangements

F Moura, M D, Paris, France The Classification of the Muscles of the Larynx

Ephraim Cutter, M D, New York Relations of Phonation to Cantation, with some practical deductions

Carl Seiler, M D, Philadelphia A Case of complete Stenosis of the Larynx, in which Articulation was unintelligible, with complete Restoration of the Voice by Surgical Procedure

E Fletcher Ingals, M D, Chicago, Ill Chronic Rheumatic Laryngitis

H E Hayd, M D, Buffalo, N Y Sarcoma of the Larynx

THURSDAY, SEPTEMBER 8—FOURTH DAY

Section meets at 2 o'clock P M

W E Casselberry, M D, Chicago Ill Nasal Fibromata

John O Roe, M D, Rochester, N Y Chorea Laryngealis

M J Stern, M D, Philadelphia. Intubation or Tracheotomy

Bouchet, M D, Paris, France Tubage of the Larynx

Carmalt Jones, M D, London, Eng The Action of the Epiglottis in Swallowing

M F Coomes, M D, Louisville, Ky The Deleterious Effects of Tobacco on the Throat and Nose

F Semeleder, M D, Mexico Twenty years of Laryngological work in the City of Mexico

Geo Mackern, M D, Buenos Ayres, Argentine Republic The Local Treatment of Diphtheritic Membrane by Carbolic Acid and Iodized Steam Inhalations

FRIDAY, SEPTEMBER 9—FIFTH DAY

Section meets at 2 o'clock P M

A Schnee, M D, Nice, France Cure of Papillomata Laryngis

J H Hartman, M D, Baltimore Cystic Tumors of the Epiglottis, their Pathology and Treatment, with report of Cases

M C O'Toole, M D, San Francisco The Laryngologist, what should constitute his special practice?

J O'Dwyer, M D, New York The Treatment of Chronic Stenosis of the Larynx and Trachea by Intubation

A B Thrasher, M D, Cincinnati, O Resorcin in the Treatment of Nasal Catarrh

Mr Lennox Browne, F R C S E, London, Eng Recent Views as to the Pathology and Treatment of Tuberculosis of the Throat and Larynx

A J Coey, M D, Chicago, Ill The Relation of Asthma to Nasal Irritation

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SECTION IV —OBSTETRICS —A meeting of the officers of this Section, including the Vice-Presidents and Members of the Council, will be held in the Georgetown Medical College, corner of 10th and E Sts, Washington, D C, on *Saturday, September 3d, 1887*, at 3 o'clock, P M, to consider and arrange the work and details for the Sessions of the Section during the ensuing week

SECTION XVI —MEDICAL CLIMATOLOGY AND DEMOGRAPHY —There will be a meeting of the officers of this Section in the Cornwell building, Pennsylvania avenue, between 14th and 15th streets, at 4 o'clock, P M , *Saturday, September 3d*, for conference respecting the business of the Section Officers of the Section should state whether they can be present, and advise Dr Denison, through the office of the Secretary General, 1421 G St , N W , Washington, D C , of their contemplated post-office address in that city

ALBERT L GIHON, M D , *President*

SECTION OF DISEASES OF CHILDREN —To the list of papers published last week should be added after the paper by Mr Noble Smith, "The Principles of Treatment of Club Foot, partly demonstrated by the Exhibition of Apparatus" By Will E Blackwill, London, England

SECTION ON OBSTETRICS —The following should be added to the list of papers already published

Professor W S Stewart, M D , Philadelphia, 1 Improved Obstetrical Forceps with Parallel Handle 2 The Importance of Careful Diagnosis of Pregnancy, with the History of a Case of Retroflexion of the Gravid Uterus, Labor at Term

E P Christian, M D , Wyandotte, Mich , The Proportion and Causes of Still-births

REDUCED RAILWAY RATES IN CANADA —The Inter-Colonial Railway Co will return free of charge members who pay full fare coming over its roads The Canada Atlantic Railway Co , the Northern and Northwestern Railways, and the Napanee, Tamworth and Quebec, will return members for one-third fare who pay full fare coming

J W H LOVEJOY, M D , *Chr'mn Com on Trans*

HOTEL ACCOMMODATIONS IN WASHINGTON —The attention of those who have not completed their hotel arrangements during the Session of the Congress is called to the list of hotels on page 10 of THE JOURNAL Advertiser

TO THE CONGRESS FROM THE WEST —Members of the Congress can leave St Louis, Mo , any morning or evening in Buffet and Pullman palace cars, without change to Washington, via the "Air Line," Chesapeake and Ohio, and Midland Railroad Members can return by Midland R R , or from Old Point Comfort Certificates will be honored at either place and one third of full fare will be charged for return tickets Arrangements have been made to give ample time to visit Virginia Beach, Norfolk, Portsmouth, Old Point Comfort, Richmond, Natural Bridge, Luray Caverns, White Sulphur Springs, Louisville Exposition and Mammoth Cave Reduced rates may be obtained at all hotels to members and friends For particulars apply to C Kennedy, "Air Line," St Louis, Mo , or D G Edwards, C & O R R , Cincinnati, Ohio

Special trains will be run from Chicago via the Baltimore & Ohio Railway, leaving Chicago on September 3, at 3 30 P M Full information concerning these trains may be found on page 9 of THE JOURNAL Advertiser

MISCELLANEOUS

A CAUSE OF TYPHOID FEVER —Discussing the distribution of typhoid fever in Oldham, Dr Niven, the medical officer of health, refers to the well known tendency of this disease to prevail in the colder rather than in the warmer months In the case of his district he interprets it by explaining that there is a general influence in operation which is for the most part compared with influences acting specially in the winter months That general influence he describes as either the admission of sewer air into houses by means of defective drain arrangements, or the action of polluted subsoil water, or the two combined Open doors and windows in summer reduce to a minimum the evils thus resulting But in the winter, injurious emanations are drawn into dwellings by the aid of internal warmth and of fires, and the foul air is penned in by reason of closed doors and windows This explanation has often been referred to by various officers of health, and the circumstances described must be regarded as having an important bearing both upon typhoid fever and other conditions of health Ventilation of houses is as much needed in winter as in summer, and we should like to see it by law which requires every house to be built on a site covered with a layer of good cement concrete everywhere adopted and carried out By such means alone can the suction into dwellings of subsoil air, which is always open to suspicion, be prevented —*Lancet*, July 23, 1887

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM AUGUST 13 1887, TO AUGUST 19, 1887

Col J H Baxter, Chief Medical Purveyor, ordered to proceed from Washington, D C , to New York City, on public business, and on completion thereof, to return to this city Par 5, S O 187, A G O , August 13, 1887

Major W D Wolverton, Surgeon, Washington Bks , D C , granted leave of absence for twenty days Par 3, S O 171, Div Atlantic, August 16, 1887

Capt Charles B Byrne, Asst Surgeon, Washington Bks., D C , granted leave of absence for one month, with permission to apply for an extension of one month Par 4, S O 171, Div Atlantic, August 16, 1887

Capt George F Wilson, Asst Surgeon, granted leave of absence for fifteen days S O 78, Dept of Dakota, August 8, 1887

First Lieut William D Dietz, Asst Surgeon, granted leave of absence for two months, with permission to apply for an extension of one month Par 7, S O 189, Hdqrs. of the Army, A G O , August 16, 1887

First Lieut W D McCaw, Asst Surgeon, relieved from temporary duty at Ft Riley, Kans , and ordered to his proper station, Ft Leavenworth, Kans Par 3, S O 84, Dept Wisconsin, August 15, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING AUGUST 20 1887

Medical Inspector S Robinson, placed on retired list

P A Surgeon J E Gardner, detached from Naval Hospital, Norfolk, Va , and ordered to the Fish Commission Str "Albatross"

Asst Surgeon Wm Martin, ordered to Naval Hospital, Norfolk, Va

Surgeon W K Van Reypen, appointed Medical Inspector from August 16, 1887

P A Surgeon M H Simons, appointed Surgeon from August 16, 1887

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDING AUGUST 20 1887

Surgeon W H Long, leave extended six days on account of sickness August 13 1887

Surgeon C S D Bessenden, granted leave of absence for thirty days August 19, 1887

Surgeon John Godfrey, granted leave of absence for thirty days August 17, 1887

P A Surgeon A H Glennan, granted leave of absence for thirty days August 18, 1887

Asst Surgeon W P McIntosh, granted leave of absence for twenty five days, on account of sickness August 17, 1887

THE

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ORIGINAL LECTURES.

LECTURE ON THE TREATMENT OF TYPHOID FEVER

BY PROF DR HERMANN von ZIEMSSEN,

DIRECTOR OF THE MEDICAL CLINIC IN MUNICH

(*Concluded from page 261*)

We now come to the physical and pharmaceutical methods and measures used in the treatment of typhoid fever Speaking generally, the physical measures are to be placed above the pharmaceutical, though the latter cannot be dispensed with Had we a specific means of rendering harmless the cause of the disease, of course our endeavor would be to administer it at the beginning of the disease But we have no specific which acts in the same way as quinine in intermittents or salicylic acid in acute rheumatism The only drug to which we can ascribe a kind of specific action, is calomel, perhaps on account of its entire or partial change, by the chlorine of the sodium chloride in the intestinal juices, into corrosive sublimate I give calomel in 3 doses of gram 0 5 in two hours, and then obtain a number of thin grass- or moss green (calomel) stools and a considerable reduction of temperature, which often goes down to normal and lasts about 12 hours These are the primary effects of calomel

The secondary effects of the drug consist in a modification of the intensity of the infectious condition, as Liebermeister has shown Those cases which are early subjected to treatment by calomel generally run a somewhat milder course than those in which it is not used, or only used later, milder both in regard to the fever as well as in the local affection of the intestine The earlier calomel is given the better—best at all events within the first 5 days, but it should be used during the first week The action of calomel (or the sublimate) is very possibly a sterilizing one on the specific bacteria vegetating in the intestine, but beyond this we know nothing more exact An abortive action of calomel, such as has been claimed by Wunderlich, has not been shown Griesinger, then Baumler, and more recently Weil, have shown that neither the mortality is lessened by the use of calomel, nor the number of aborted cases increased, and that no other properties belong to calomel than those of a mild, non irritating evacuant which reduces temperature Against the assertions of some authors that we have to do here only with a simple eccoprotic effect, is our experience that the action of calomel on the temperature and the local intestinal affection is seen when active diarrhœa already exists, and there need be no further discussion as to the eccoprotic action The attempt to fix the hypothetical specific action by long continued calomel treatment, and to force a true abortive calomel treatment, has been made at different times, but without success I have treated a series of cases with small doses of calomel for a long time, after having begun treatment with larger doses, but without obtaining any strikingly good result So, too, the sublimate treatment of typhoid fever has been without good results

Next to calomel, baths deserve the greatest consideration On his admission to the hospital, if his condition is not too bad, the patient receives a warm bath to cleanse the skin and remove possible parasites Then the course of the temperature for 12 or 24 hours is determined by bi hourly measurements, best taken in the rectum, because the patient can better endure the short duration of the measurement here (2 or 3 minutes) than the 15 or 20 minute measurements in the axilla, and even in private practice rectal measurements are but seldom objected to In private practice, meanwhile, the necessary directions and regulations as to the bath and care of the patient may be given, the sick-room furnished with a change of beds, and everything in the way of linen, vessels, etc, prepared for a long sickness

When the normal temperature curve is determined it is best to begin immediately with the baths, first with luke warm baths at 86°–81 5° F, 15 minutes long, and with continual stirring of the water and washing over of the upper part of the body, so far as it is not dipped into the water The higher the temperature goes, the more severe the cerebral affection, the muscular weakness, and the intestinal affection, so much the cooler must be the bath, though for several years I have never given a bath lower than 63 5°, that is, below the temperature of the room In the hospital the bath-tub is placed by the patient's bed, with a screen around it, and the patient is lifted into it It is necessary to renew the water in the bath only once in 24 hours

In many cases the bath is given only luke-warm (not under 75°) during the whole course of the illness, beginning each time with a temperature of 88 2°–86°, and while the patient sits in the bath the

[1] Translated by permission of author and publishers from advance sheets by Wm G Eggleston M D, of Chicago

and 7, given in wafers I seldom gave more than 2 grams, and frequently, as in women with weak constitutions 1 5 and 1 gram was given in the third week

Of late years Knorr's antipyrin has completely supplanted quinine as an antipyretic in my practice In doses of 5 grams (best given in doses of 2, 2, and 1 hourly in the evening after 6 o'clock) it is a much more certain antipyretic, and is entirely free from undesirable after effects It is only infrequently that vomiting is caused by it, the sweating is moderate, sleep usually undisturbed, and the euphoria in the morning is in the highest degree pleasant The patients are perhaps somewhat apathetic, but have nothing to complain of The temperature falls from 2° to 4° C , and remains low for a tolerably long time, certainly as long as with quinine The rubeoloid exanthem so frequently observed is of no significance The prompt action on the rectum is also pleasant, in the same or somewhat larger doses I have seen vomiting repeatedly after clysters of antipyrin, and others have observed the same effect I have now used antipyrin in several hundred cases, and always with satisfaction, and can recommend it as a most trustworthy antipyretic

Thallin is also a very good antipyretic, as I have shown by a series of cases, but it seems that it cannot take the place of antipyrin Under its use I have repeatedly observed the same shivering with the reascension of the temperature as with kairin It is in favor of thallin that it acts in comparatively small doses We use about one-fourth as much as the dose of antipyrin— 25—given 4 or 5 times

Antifebrin, which we have used since the first notice of it from Kussmaul's clinic, and in comparison with antipyrin, is a valuable antipyretic Our experiments with it have given extraordinarily favorable results Its action in fever is very certain, the secondary effects are but slight and temporary, and its administration is followed by great euphoria and decided improvement in appetite The drug has the very great advantage that it acts in such small doses (one-fifth or one fourth the dose of antipyrin), and that it is so cheap

Kairin and salicylate of soda are perhaps too antiquated to be considered antipyretics

The treatment of individual symptoms, symptom excesses, plays an important part in the treatment of typhoid fever It has already been said that so severe an infection of so great length and of such deleterious action on the nutrition of the animal cells must have a corresponding amount of organic disturbances in its course, each one of which may threaten life, and require skill on the part of the physician What cell territories are affected by the destructive influences of the infection—the typhoid bacilli and their products—whether the brain, the kidneys, the parotid gland, the bronchial mucous membrane, the pulmonary tissue or the skin, depend upon factors which are only partly known to us Of how great importance are proper innervation and circulation is shown by the good effects of baths and rubbing on the nutrition of the skin during typhoid fever

The cerebral symptoms, headache, oppression, vertigo, generally call for the permanent use of ice-bladders By far the greater number of patients, and in all in whom an antipyretic treatment gives a sensorium, find the effect of the ice-bladder very grateful, and call for them after they have seen their effect But there are some patients, especially those of a nervous nature, to whom permanent cooling of the head is unpleasant In such cases the subjective feelings of the patient must be taken into consideration

Sleeplessness, restlessness and tossing at night are best controlled by a moderate dose of morphia, I usually begin with a dose of 1 centigram, and afterwards go up to 1 5 or 2 cgm I have never seen such after effects as hyperæmia of the brain, increase of headache, etc Most patients praise the peaceful rest which morphine gives them

For very active delirium with bodily unrest, the condition which gave rise to the old term *febris nervosa versatilis*, luke-warm and warm baths, as recommended above, should be given in the evening and the early part of the night If these do not produce the desired effect a hypodermatic injection of morphine should be given In the severe and more torpid type of cerebral troubles, which years ago was known as *febris nervosa stupida*, cold baths with short douches are best, and act better than morphine in giving a few hours of peaceful sleep

Cardiac weakness is *the* phenomenon which is of most dangerous import, and demands the greatest attention on the part of the physician and attendants This condition is always to be expected when a patient comes into an attack of typhoid fever with a weakened heart, as, for example, after an attack of endo-myo-pericarditis, in cases of valvular disease, dilatation of the ventricles, muscular weakness from strain, from intemperance, etc The danger may be recognized early by the comparative high pulse rate at the beginning As a rule the pulse then becomes smaller, and the temperature of the skin falls in consequence of the insufficient filling of the peripheral arteries High blood temperature with cool extremities, very frequent, small and irregular pulse, pale or pale livid color of the skin, these symptoms show a most significant complex, and demand the most energetic use of stimulants and the most careful overlooking of the whole dietetic arrangement

As regards drugs in this condition I give decided preference to camphor, because it can be given subcutaneously in almost unlimited quantities and as often as desired without the slightest local troubles The action of subcutaneous injections of oleum camphoratum fortius (1 part of camphor to 5 of olive oil) from 2 to 5 syringefuls, is most satisfactory and continues for a considerable time In a few threatening conditions 1 or 2 syringefuls may be injected every 3 hours, or it may also be given internally tolerably freely Of wines I give champagne and of the concentrated alcoholic stimulants I give preference to cognac Too much of a good thing is less harmful than too little in these cases The quantity to be given in 24 hours must be graduated by the indications, and by the results of the first doses

Bed sores may be almost absolutely prevented by a large water mattrass In cases in which they have developed before the use of the water mattrass, they may usually be brought to a stand-still, and generally improved by the mattrass For dressing them boracic acid salve, zinc and lead plaster mulls and white lead plaster should be used Even with the best dressings salves and plasters cannot be held on the sacrum if the patient lies on the back It is therefore best that the patient, even when he uses a water mattrass, should lie on his sides for a few hours each day, but during the height of the fever this cannot be done It is possible during the period of remission, however, and in this stage healing takes place more rapidly But, as a matter of fact, position, antiseptic dressings, etc , are of no value without a water mattrass, though when antipyretic treatment and a water mattrass are used from the beginning of the illness bed sores rarely occur

Such affections of the skin as furuncles, circumscribed gangrene, etc , which are seen in cases of severe typhoid fever which are indifferently treated, rarely or never occur under antipyretic treatment, it is then in the power of the physician to prevent them Baths not only cleanse the skin, but improve its circulation and nutrition, so that the functions of the outer skin, the blood supply of the cutis, and the secretions of the sebaceous glands, are much better than with the indifferent treatment of typhoid fever

In very extensive intestinal affection in the course of typhoid diarrhœa and meteorism are often excessive Faulty diet and frequent use of opium and tannin, and the like, are chiefly responsible for these conditions Do not under-rate the danger of extensive meteorism Aside from the stretching and the irritation of the nerves of the intestinal wall, the secondary effects upon the lungs and heart may cause serious trouble To dissipate this condition one or two ice bladders may be placed on the abdomen, or Priessnitz's pack may be used on the abdomen If this be not sufficient two doses of calomel, of 0 3 each, as recommended by Friedreich, often have the desired effect Naphthalin, and turpentine clysters (a teaspoonful of spirits of turpentine) are also to be recommended[1] Massage of the abdomen has been recommended, but there is danger of its causing perforation of the intestine, especiallly in the hands of a layman

Diarrhœa should, as a rule, not be treated when it is not too frequent, that is, when there are not more than 4 or 5 stools in 24 hours If treatment seem necessary small clysters of opium paste (decoc amyl 30 grams, tinct thebaic gtt xx) may be used The best is the thin clyster made in the house, and injected after the addition of tincture of opium These may be applied, when necessary, once or twice daily, and not only give rest to the intestine, but act well on the general feelings of the patient by dissipating the uneasy sensations in the abdomen

Intestinal hæmorrhage is a very annoying, and prognostically a grave incident, though the mortality in my cases has not been very large in the last 10 years I have lost only 25 per cent of my cases that had intestinal hæmorrhage, while Liebermeister lost 38 6 per cent, and Griesinger lost 31 2 per cent Immediately upon the beginning of intestinal hæmorrhage every kind of food, all medicine, the baths, and every movement of the body are discontinued, and two ice bladders placed over the abdomen Thirst is quenched only with small bits of ice As a styptic a solution of sclerotic acid (1 5, in water) is given subcutaneously, a syringeful every half hour The injection burns, but if properly dissipated by rubbing does not cause an abscess, while the extract secalis cornuti (German Phar , 2d edition) not infrequently does In very profuse hæmorrhage, threatening life, I use enemata of ice-water, the influence of which on the intestinal ulcer is not only of a direct but also of a reflex nature

As regards the use of styptics, such as acetate of lead, which many authors advise (in doses of 0 2 gram hourly at first, then every 2 hours, and later less often, Weil), I have had no experience I have always been afraid of exciting peristaltic action, and on that account have avoided the giving of any and all medicine by the mouth It is possible that I am wrong, however The recommendation of acetate of lead by many authors is certainly not without reason At all events, I recommend that the diet for several days should consist of absolutely nothing, until the immediate danger is past, and there is less fear of a return of the hæmorrhage When the hæmorrhage is very profuse and death from cardiac paralysis is threatened, I would recommend injections of blood or salt water by the method described in a previous lecture A year ago I made a blood injection on account of hæmorrhage in a case of typhoid fever, and with a favorable result

Bleeding during the period of late healing (fourth to sixth week) is more grave as regards prognosis than during the period of casting off the scab (in the second or third week), because it is in this case almost always due to delayed healing of the ulcer and a scorbutic condition of the walls of the ulcer, in which the bleeding is very gradual but lasts a long time It is important to know this, inasmuch as it renders the prognosis much more grave, and calls for very energetic treatment In such cases acetate of lead and other methods come into use

Perforation of the intestine is the gravest accident in typhoid fever The prognosis is almost absolutely fatal Some cases of recovery have been observed, as by Leibermeister Two years ago, in my clinic, there was a case of indisputable perforation, which was sacculated The air which entered the peritoneal sac was withdrawn by means of a trocar, and the sac was healed up, without its being necessary to open the sacculated perforation opening In case of perforation you cannot do better than to give opium *per os* and *per anum* in tolerably large doses continually, as in developing peritonitis the rapid absorption of opium is not very certain, injections of morphia may also be given One or two ice-bladders should be placed over the abdomen, no food whatever

[1] Turpentine given internally in milk or in emulsion seems to do a great deal in the way of counteracting meteorism Bell and more recently Kesteven have called attention to the value of eucalyptol for this condition —[*Trans*]

should be given, thirst should be quenched by small pieces of ice, and every movement of the body should be avoided Should the most favorable termination (sacculation of the perforation) occur, the sacculation should be opened and treated antiseptically, as in a case of perforation of the intestine (of unknown origin) recently reported by E Wagner, which terminated favorably Puncture of the abdomen with a thin trocar to reduce tension in the peritoneal cavity is scarcely ever of more than temporary benefit A curative effect, on account of the generally already existing purulent peritonitis, is scarcely ever to be looked for [3]

The treatment of the most important complications, such as pneumonia, erysipelas, parotitis, otitis, etc , must be regulated by the rules for the treatment of these processes At present we will only speak of the prophylactic treatment, which gives better results than the medicinal These complications have now become very much less frequent under methodical antipyresis It is highly probable that these complications are the results of secondary bacterial invasions Not only is it best to guard against such bacterial invasions by disinfection of the places in which they are likely to lodge, but also against their further growth by cleansing the superficial membranes, removing dried secretions, and cleansing the fissures beneath them The lodgment of Fehleisen's streptococcus in a fissure under the dried crusts of secretions on the alæ of the nose or at the corners of the mouth, in the mucous membrane of the mouth, throat, Eustachian tubes, Steno's duct, and thus the beginning of parotitis, etc , is very probable, and this view is supported by the fact that these complications are only seen in severe cases, and that they may be prevented by careful cleansing and washing of the mouth and nose

The greatest care should therefore be given to the depurative and cosmetic treatment of the mucous membranes of the nose and mouth, in order to prevent fissures and excoriations, wherever it is possible for them to develop In this the value of an experienced and careful nurse is best seen The mouth should be washed daily with luke-warm borated water, the nose syringed with the same, the alæ of the nose and the lips covered with paraffin, boracic acid salve or borated lanolin, and the smallest excoriation brushed with chloride of zinc or sublimate solution, then covered with boracic acid ointment, and with an antiseptic dressing

The care of convalescence from typhoid fever is not the lightest and most thankful task of the physician When the fever ceases patients are anxious to get out of bed, to eat, to walk about, to talk, and receive visits Concede nothing It is better to be too strict than to make concessions that may cause trouble Complete rest of body and mind is essential in convalescence We often see, after too much liberty, and too many visitors, a slight rise of temperature in the evening, a restless night, palpitation of the heart, headache, etc The building up of the muscular system requires several weeks, and any strain, mental or bodily, may cause cardiac acceleration and arythmia, sleeplessness and slight rise of temperature These points are especially important in regard to those who wish to think of or discuss business affairs after an attack of typhoid fever Even after the mildest case the patient should not leave the bed before the fourteenth day, and after a severe attack he should not be allowed to get up before the lapse of three or four weeks The nervous and muscular systems are by this time so strengthened that the patient may soon go into the open air, and the fresh air will then further the return to health more in a few days than would a week in a reclining chair The most necessary visits may be permitted, but they should be limited to 10 minutes

In regard to relapse of typhoid fever The careful physician will be warned of its possibility by the slow regression of the spleen, and will be all the more careful as regards the patient's diet, condition and surroundings While I doubt if a slight error in diet, a visit, or a mental disturbance may be the cause of a relapse, I think that such an error may precipitate it

The treatment of the relapse is about the same as that of the primary attack, but milder Luke-warm and warm baths are sufficient, and antipyretics are either avoided or given in half the ordinary doses In some cases in which the splenic tumor indicated a tendency to a relapse I have given 1 gram of quinine a day for several days In many of these cases the spleen was rapidly reduced in size, but it cannot be proved that the relapse would have occurred had not the quinine been given

In one or two months after convalescence has been fully established, the patient may be sent away from home to the mountains or to a climatic resort, and, when circumstances permit, he should have complete rest for a year

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[3] It is difficult to imagine why Professor Ziemssen does not even refer to the surgical treatment of perforation of typhoid ulcers—perforative peritonitis The question as to whether already existing peritonitis contraindicates operation has been settled by the successes of Schramm, Boully, Israel, Litten Keith Wells Tait and many others That an operation of this kind on a typhoid patient is a serious matter must be admitted but it has been shown that peritonitis often rapidly subsides after an operation has been made, and the abdomen washed out and drained Three years ago Miculicz reported a successful case of suture of the intestine for perforation by typhoid ulcer The question seems to be so well settled by the successful operations for perforative purulent and other forms of peritonitis that while the time for the discussion of its justifiableness is past it is certainly deserving of mention "It must be submitted as a conclusion from facts and recent experience, that the most *rational treatment of peritonitis is especially of the graver forms*, is by abdominal section" (Stephen Smith Operative Surgery)

In peritonitis from intestinal perforation says Oberst, the diagnosis is surely fair, though he thinks washing out and drainage are favorable only when either there is an encapsulated abscess or no extensive adhesions between loops of intestines have taken place In Miculicz's case a quart of pus was removed, and he sewed up a 6x4 cm perforation in the loop of the ileum The operation was performed 72 hours after the accident Oberst operated in a case of perforation of prolapsed scrotal hernia, 4 days after the accident and when the patient was in a state of collapse The patient's condition was such that suture of the gut did not seem warranted and an anus præternaturalis was made After first 5 days there was no pain or fever But nutrition was difficult, and the patient died of hypostatic pneumonia and decubitus nine weeks after the operation The case is reported in Centralbl f Chir, No 20, 1885

See Miculicz Laparotomie bei Magen und Darmperforation Samm lung klinischer Vortrige, No 262 Senn's "Present Status of Abdominal Surgery," THE JOURNAL, May 29 and June 5 1886 THE JOURNAL, January 23, 1885 Polvillon Bull de l'Académie de Médecine, Paris, 1885 2, s xiv, 860-862 R J Hall, Suppurative Peritonitis, etc , N Y Med Journ , 1886, xliii, 662 Barker, British Medical Journal, 1886, 1, 618 Wylie N Y Med Record, 1887, xxv, 553 , Treves Medical Press and Circular, 1885, n s , xxxix, 398 Gaston, THE JOURNAL, August 27, 1887 [*Trans*]

ORIGINAL ARTICLES

THE BURTON CASE

Read in the Section on Medical Jurisprudence, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY W THORNTON PARKER, M D,

OF NEWPORT, R I

On the morning of October 6, 1885, the quiet town of Newport, R I, was startled by the report that Benjamin J Burton, an industrious and inoffensive colored man, had committed suicide by shooting himself in the head and in the heart The act was supposed to have been committed just after finishing his breakfast The body was discovered lying on its back on the floor near the table where he had been eating The body was stretched out—the head somewhat bent over to the right, the hands natural, the right open, the left not so much so, the legs were slightly separated The revolver was about a foot from the body, the barrel pointed towards it The mouth contained food slightly protruding from it Upon the floor was a teacup tipped over on its side

The Medical Examiner, the Coroner and the City Marshal were soon on the spot The family physician was also present, and among the first to see the body The case was decided as clearly one of suicide, and no inquest was considered necessary It was reported that for some time the deceased had been in poor health and very despondent, and his children testified that he had threatened on more than one occasion to take his own life He dreaded appearing in court, for which he had returned to his house from his office to make preparations It was also stated that Mr Burton had never fully recovered from a severe fall which occurred some months before his death

Considering these facts no suspicion appeared to exist that the deceased had been murdered until after the funeral, when rumors were circulated that a murder instead of a suicide had been committed Finally the community became so excited by increased suspicions that the authorities were obliged to order an inquest The physicians seemed assured that the theory of suicide was satisfactorily proved, and although they deemed an examination unnecessary, the authorities determined to seek further light

At the time of his death Mr Burton's family consisted of his daughter, Maria Dorsey, and her husband, Allen W Dorsey, and a younger daughter, Emily J Burton, a girl of 18 years Mr Burton was a widower His house was a comfortable frame building, with enough room to enable the family to live comfortably and separately Upon the morning of his death the son in law was supposed to be ill in bed The son-in law was a student of medicine at the University of Pennsylvania, and was making the necessary arrangements to complete his studies

Soon after the account of the suicide had been published in the papers I expressed my opinion to the effect that the statements made at the examination concerning the supposed suicide were, in my judgment, impossible The following is the report of the autopsy as communicated to me by the Acting District Attorney "The ball, which entered the cranium on the right side, was found imbedded in the posterior part of the left lobe of the cerebrum, and had therefore traversed the cerebrum from front to back and from right to left

"The brain, being much softened, could not be dissected, and the track of the ball could not be followed, but it was necessarily above the base of the cerebrum, and could not have touched the cerebellum

"Such an injury might have been eventually fatal, and although it might induce immediate loss of consciousness, would not necessarily effect that result

"The other ball penetrated the thorax at a point three inches to the right of the left nipple and two inches to the left of the median line, on a level with the nipple Having opened the chest, its contents were taken out and examined, and it was found that the ball had passed through the left ventricle of the heart, entering near the base and emerging at the apex, which would probably result in instant death Afterward the ball passed between the seventh and eighth ribs, impinging on the eighth rib in a manner likely to deflect it from its direct course The rib was taken out, and the flesh near the point at which the ball passed it was assiduously and minutely explored for an hour or more without success As the ball was very small and the corpulence of the subject excessive, and as the finding of the ball could have no bearing on the object in view, it was concluded to be inexpedient to pursue the search further"

At the first examination Maria Dorsey, the wife, testified that the last she had seen of her father was on the night before October 5, that Mr Burton called them all downstairs and said that he had something very important to say to them He was despondent and said he would not be long with them, he felt badly about leaving the family, especially the younger daughter He said he felt as if he had not long to live, probably not more than a few days at most Mrs Dorsey testified that she saw her father the following morning just before she went into a neighbor's "to fit on a dress," that afterwards she went to the post office, and then went right home again and went into the house by the front door, and thence through the dining-room to the kitchen and saw her father lying on the floor, called her sister and then ran for a neighbor, and then returned She also testified that when she found the dead body of her father, her husband and her sister were upstairs She left her husband sick in bed, and he did not come downstairs until after the discovery of Mr Burton's lifeless body and her own return to the house "We had not been to breakfast at the time of the shooting"—neither her sister nor herself were in the kitchen when the father came to breakfast It was about 9 15 when Maria Dorsey went into Mrs Trager's She was not present when her father's body was taken up from the floor Mr Burton usually ate his meals in the kitchen, did not know whether he had finished his breakfast or not at the time of the shooting, some one led her upstairs after she had

seen her father's body Her husband was studying to be a doctor, but had lived with her father ever since his marriage, although he paid no board either for himself or for his wife Mr Burton did not wish him to do so Her father had never said a word to Mr Dorsey or to herself about remaining at the house, and the best of feelings existed between them all

The younger daughter testified that her father's age was 59, and that he enjoyed good health until the previous summer, when he had a fall He seemed depressed since his fall, seldom said anything about the house Before that he was accustomed to talk freely with them His meals were generally prepared for him and left upon the table for him to eat at his convenience Emily testified that on the morning of Mr Burton's death she had eaten her breakfast alone, Mr Dorsey being sick in bed, and her sister having gone away on an errand As she went to her room she met her sister just starting to go out, she sat in her room reading until startled by her sister's screaming, she then ran downstairs to the kitchen—there was no one there, but her father's body was on the floor She testified also that she saw Mr Dorsey get out of his sick-bed She confirmed the testimony of her sister relating to Mr Burton's depression of spirits and to Mr Dorsey, and also stated that Mr Dorsey seldom met Mr Burton, and that she never knew them to converse together Debts and illness were the only reasons she could assign for the suicide

Allen Dorsey testified that he was 25 years of age, that he had known Mr Burton by sight for several years, and that he had lived with him since the 15th of June, also that he was a student of medicine at the University of Pennsylvania That he last saw Mr Burton six days prior to his death, and next saw him lying dead in the kitchen The screams of his wife first announced to him the death of Mr Burton He was ill in bed, but arose and dressed himself, and rushed downstairs and gave the alarm The reason he did not examine the body when he found it in the kitchen was his anxiety to procure medical help, if possible to save Mr Burton's life He then went upstairs to his room to comfort his wife Dorsey described the position of the body as follows Right arm extended, a pistol near by, barrels pointed towards the body From appearance of the body and the pistol near the hand concluded that Mr Burton had committed suicide Dorsey did not know, he said, until afterwards, where the shots had lodged Dorsey also confirmed his wife's testimony as to Mr Burton's ill-health He affirmed that he had offered to pay Mr Burton board, but that it had been refused He denied that Mr Burton had ever spoken to him in reference to leaving the house He also denied ever having had any trouble with Mr Burton

The Medical Examiner testified that he had known Benj J Burton previous to his death, that he was called on the morning of October 6 to see his dead body Dr Francis had preceded him, and they moved the body from the floor to a table, that together they made an examination, with the results already detailed He further testified that there was not much appearance, if any, of the hair being burned by the head wound, and that the revolver used was so small that it might have been held near the head *without burning* He also thought that the pistol must have been held very near the head for the ball to penetrate as it did

Dr Palmer, of Providence, with the same pistol and cartridges, proved by a series of experiments that the calibre of the pistol was large enough and the cartridges powerful enough to burn the hair beyond any distance which Burton could have held it, and that the positive inference from the unburned hair, which I had stated in the first of the examination, was that the head wound at least was not self inflicted, and that the case was undoubtedly one of murder

But the Examiner justified his theory of suicide by stating that at the time of Mr Burton's death the friends of the deceased were absent, and that Dorsey and his wife said many things which convinced him that the deceased had premeditated suicide This is precisely the attitude taken by the companions of Sergt Rinn (about to be reported), and in my opinion should never be allowed to influence the opinion of the medical officer whose duty it is to carefully examine, weigh the evidence, make the examination, produce the bullets, and report He considered the head wound hardly fatal, and the defense dwelt upon this question of fatality, and made their experts testify to the cases of extensive brain wounds already well known and recorded, in which the fatal termination had taken place only after a long time of comparative comfort

The Medical Examiner stated that there was abundant evidence to prove that a man might live for years with a wound as serious as the wound which he had described He considered that the heart wound was the second one inflicted, and then made the remarkable statement that "the wounds *could have* been *self inflicted, but that this was more possible than probable*" The Medical Examiner exhibited the ball found in the brain, and although it came from a 22 calibre pistol, yet it had been flattened to such a remarkable degree that its passage through the brain must have caused a very considerable degree of damage, tearing and lacerating that structure to a very severe extent, and accomplishing as much harm as a smoother, rounder piece of lead, or bullet from a much larger pistol At the inquest much of the testimony was in contradiction of that given by the children of the deceased, and it was shown that anything but a happy household existed, and that Mr Burton was strongly opposed to his son-in law's living upon his hard-earned money, and that a decided change had been planned by which he should be able to rid himself of his son-in-law and of his daughter's support The testimony also showed that Mrs Dorsey's truthfulness could not be depended upon, and that Dorsey's conduct was certainly open to suspicion

The Newport *Daily News* of Oct 29, 1885, gives the following "Dr W Thornton Parker testified Am a physician of Newport, have heard about the case, have read the description of the wounds, had been an Acting Asst Surgeon in the Army, and have experience in pistol-ball wounds The very positive inference from the fact that the hair was not burned

would be that the wound was not self inflicted It is barely possible that the pistol used in this case could have been held by the person shot Should say the heart wound was the first inflicted *(if suicide and not murder was the cause of death)* If the head wound had been self inflicted and the one first inflicted it would hardly have been *possible* for the heart wound to have been self inflicted (Dr Parker produced a letter from Dr Richardson, of Boston, a surgeon, to the effect that a self inflicted heart wound might be followed by a head wound also self inflicted, but if the head wound were self-inflicted loss of consciousness would follow, rendering a second shot impossible Dr Parker also read a report of a post mortem examination made by him about a year ago, on Sergt Rinn, U S A, at Ft Union, New Mexico, the case being very similar in many respects to the one under consideration) Dr Parker was of the opinion that if the head wound had been the first inflicted loss of consciousness would have followed at once, and the second wound could not have been given immediately The heart wound was, he should say, necessarily and instantly fatal The fact of finding food in the mouth would make the theory of suicide extremely improbable Suicide at the time of eating would seem inconsistent The place of entrance of the shots and the course of the bullets would add to the suspicion caused by the presence of food in the mouth—a suspicion so strong that only a *remarkable exception could account* for the theory of suicide The point of entry of both shots in my view is foreign to the view of suicide The wound in the head directed by a suicide would be more likely to be upward than downward, and the heart wound backward "

During the first examination of Dorsey I wrote to Dr Richardson, of Boston, for his opinion of the case My letter was very brief, and gave only a few reasons for my suspicions I append Dr Richardson's answer, and also a telegram received by me during the examination

SOMERSET CLUB, BOSTON

"*Dear Doctor* — I think with you that the theory of suicide is very improbable It is possible I think for a man to shoot himself through the heart and retain consciousness long enough to make the second attempt, but it seems very improbable indeed If the brain is first injured I believe unconsciousness must ensue and last for quite an interval of time, *after which* of course the second shot may be fired This seems to me quite possible and I have no doubt it has been done by desperate patients I can recall cases in which numerous shots have been fired into different parts of the body, but do not know of any case where the brain has been *perforated* first The man may have used two pistols firing them at the same instant, but this has of course occurred to you I think the matter of burnt hair and clothing very important, as well as the part of the brain injured if the medulla or its neighborhood was lacerated, it would render the firing of a second shot impossible of course If the theory of suicide is to be established it seems to me it must be taken for granted either that the man used two pistols or that he fired the heart shot first, or that he fired the second shot sometime after the first which in that case was the head shot

Very sincerely yours,

M H RICHARDSON

"October 21, 1885 "

The theory of Dr Richardson that a self-inflicted heart wound might be followed by a head wound also self inflicted is correct in a very limited number of heart wounds, and under exceptional circumstances, but in the heart wound of Burton, complete perforation of left ventricle, this theory would not apply, so that looking at the matter from either standpoint the case clearly is one of murder and not suicide So too with the soldier whose post-mortem examination I have recorded *without remarks* As assistant I performed the autopsy, but my Surgeon decided the case to be merely suicide, while to my mind the facts very clearly suggest murder The two severe head wounds occurring so closely together, and the shots occurring so nearly together prove to my satisfaction that Sergt R was shot first in the heart and after falling was then shot by his murderer twice in the head The room was then arranged to suggest suicide, and the mirror was a superfluous addition to the preparations described The following is the record of the autopsy referred to in first examination

"*Record of Post Mortem Examination by Dr W T Parker, 'F A R,' U S Army, Ft Union, New Mexico* From Kansas City, (Mo) *Medical Index*, Aug, 1884 Time of post-mortem 11 30 A M, April 20, 1884, 5½ hours after discovery of the body, and presumably about six hours after death

"*General appearances* Body of a man about 29 years of age, well nourished, healthy appearance Mouth partly opened from which some blood had been flowing Eyelids partly open, particularly right one *Rigor mortis* commencing Upon the head, in the right parietal region, three inches above right ear, are two bullet wounds, one above the other and about an inch apart The hair around the wound is somewhat burnt, bloody and blackened with powder, indicating close contact with the weapon used On the thorax two inches in a straight line to the right of the left nipple is a third bullet wound The under surface of the body is deeply stained (stasis) An incision extending from the right ear upwards across the head dividing the muscles of the scalp discovers two bullets, flattened to a remarkable extent—and imbedded in the soft parts Parts surrounding the wounds on the head slightly swollen and infiltrated with blood The skull is neither broken nor indented

"*Examination of the Thorax* Pericardium distended with semi-coagulated blood The heart weighs 10 ounces A large bullet wound is found completely penetrating the left ventricle obliquely backwards The left lung presents strong pleuritic adhesions At its roots is found the third bullet, slightly scratched by contact with the rib in its passage to the heart. Right lung normal Other viscera not examined

"*Remarks* —The deceased was first seen about 6 o'clock A M, Sunday, April 20, lying on the floor face downwards Near by was a hand mirror not broken,

supposed to have be used by the deceased in the suicidal act A pistol of the British bull-dog pattern, containing three shells, was found close by his left hand About an ounce of blood was found under his mouth which had escaped from the lung His white shirt was blackened in the vicinity of the chest-wound and somewhat stained with blood Two blood-stains from wound in head extended across the face from right angle of mouth The body was slightly warm when found *Rigor mortis* rapidly extending No papers were found on the body In the pockets of the deceased were a few nickels, a handkerchief and twelve pistol cartridges which correspond with those in the pistol which had been fired into the body The body was fully dressed and the doors of the room unlocked"

The case was reported as one of suicide—I am not willing to affirm that it was not a case of murder It was certainly a very suspicious case and should have received a very rigid examination

To aid me in the difficulties of my position as medical expert for the State, and to bring together the opinions of medical men of great experience and of high professional standing, I prepared the following circular and mailed it to many who would be expected to take interest in the medico-legal questions involved

Dear Doctor —I desire to call your attention to the following facts, and to ask your reply to the questions, at your earliest convenience

A middle aged man enjoying good health and owning a comfortable home is found on the floor of his kitchen—dead

He is supposed to have been in the act of eating his breakfast, food is found in and protruding from his mouth, so that at the moment of receiving the fatal shot *he was sitting quietly alone at his own table!* Witnesses declare that two shots followed in rapid succession—first a shot, then a heavy fall, and then a second shot A 22 cal pistol is found on the floor not far from the deceased, presumably placed there by the murderer to carry out the theory of suicide! Upon examination it is discovered that one bullet, probably the first, entered the cranium in the right parietal region, passing through the skull and contents and "was found embedded in the posterior part of the left lobe of the cerebrum and had therefore traversed the cerebrum from front to back and from right to left" The physicians who first examined the body found no evidence of the hair about the wound having been singed to any extent whatever

The second shot "penetrated the thorax at a point three inches to the right of the left nipple, and two inches to the left of the median line, the ball was found to have passed through the left ventricle of the heart, entering at the base and emerging at the apex" The clothing where the bullet perforated it, is burnt, and shows unmistakable evidence of close contact with the pistol when it was fired!

Assuming that this report is correct, is the theory of suicide compatible with the facts?

It is not claimed that the brain wound was necessarily *fatal*, but would not a bullet wound penetrating the skull and traversing the brain cause an amount of unconsciousness, or at least confusion of ideas, for sixty or even one hundred seconds, sufficiently profound to prevent the suicide from immediately recocking the pistol, and discharging it into his heart?

If immediately following the first shot, the man fell heavily to the floor, and *immediately* after that the second shot was heard, does such evidence not prove *murder* instead of suicide?

Could it be possible for a man to shoot himself in the head in the manner described, and then after falling, *immediately* to successfully recock, and aim the pistol and discharge it within two minutes from the reception of the perforating wound of the skull and brain?

Does not the fall clearly prove temporary loss of consciousness?

Considering the facts as stated, is not this very clearly and beyond doubt a *case of murder?*

Very respectfully yours,
W THORNTON PARKER, M D

The following are some of the more important answers received Some replies of value I am not permitted to publish

Surgeon-General F M Gunnell, U S N, writes Your circular letter has been read with interest by the Medical Officers here, who concur in the views formulated by one of them, which I enclose The views of this officer are as follows

1 The pistol *is not found in the hands* of the deceased, but on the floor "not far from the deceased" 2 One bullet—*probably* the first—"no evidence of the hair about the wound having been singed," etc The pistol shot was *fired from a short distance* and *not in close proximity* The track of the wound is "from front to back and from right to left" Now prolong this track in an imaginary line, consider not in close proximity to singe the hair and hold a pistol in the right hand and note the position of hand, wrist, elbow, and shoulder-joint and the position of the pistol in the line stated 3 The fall occurs immediately—there is loss of consciousness and *power of coordinating movements* and this removes the probability of the wound in the thorax being first inflicted The position of the body when found is not given Was he found on either side or on back? for there was a wound

"Penetrated the thorax at a point three inches to the right of the *left nipple* and two inches to the left of the median line, the ball having passed through the left ventricle *entering at the base and emerging at the apex*" Prolong the track of this wound, place the deceased in a prone position and again place the right arm in the position of firing the pistol and note the close proximity of the muzzle to the clothing

From the facts, it is not possible that the wound of the heart was the first inflicted A wound of such character does not permit the element of time taken by the fall, added to the cocking and firing and motion necessary to bring the arm in position to inflict the wound of skull and brain Suicide is not compatible with the facts as stated The fall was from unconsciousness, and it is not possible that there was time for recovery in any degree to recock the pistol, and correlate the movements necessary to inflict the second wound in thorax and heart The track of the wound in the heart precludes any supposition that the movements of recocking, aiming, firing and the positions necessary to inflict such would could have occurred after the wound of skull and brain From the facts as stated the opinion is that the case was *murder*

Dr Thomas G Morton, of Philadelphia, wrote "I presume this is the same case in which I gave a written opinion some months since" He did not consider the theory of suicide compatible with the facts, and in answering all the questions sustained the theory of murder

Dr Bigelow, of Boston, wrote I think the evidence leans so far towards homicide, that the onus lies with those who believe in the suicide theory to prove it

Dr Simon Baruch, of New York, wrote Considering the facts as stated, this is very clearly and beyond doubt a case of murder, but there is better proof in the direction taken by the second bullet (if that is correctly stated) It is utterly impossible for a man to so apply the point of the pistol to his chest as to send a bullet from the barrel towards the apex of the heart And it is highly probable that such a wound was inflicted by some one standing or kneeling behind the victim's left shoulder The theory of suicide is absurd *It may be claimed that by the use of both hands a pistol may be so applied to the chest as to send a ball in the direction claimed,* but even this view would be rendered untenable by actual trial, the adjustment of the pistol would require great precision and steadiness of hand *and considerable time for its execution*

The last statement of Dr Baruch is important when we consider the facts connected with what seems to be the murder instead of suicide of Sergt Rinn, U S Army

Among those sending positive answers in favor of the murder theory were Dr Dolan, of the British *Provincial Medical Journal,* Dr Proctor Thayer, of Cleveland, O , Dr A B Lyman, Baltimore, Md , Dr T D Crothers, Hartford Conn , Dr Chas B Parker, Cleveland, O , Prof F W Draper and Dr M H Richardson, Boston, Mass , Prof T G Morton, Philadelphia, Dr Hunter McGuire, Richmond, Va., Prof W L Davis, Chicago, Ill , Prof Chas B Nancrede and Dr John H Packard, Philadelphia, Dr Henry I Raymond, U S Army, and a few other well known surgeons whose names cannot be made public, some connected with the U S Army, and some resident in New York City

Dr John H Packard, of Philadelphia, besides sustaining the theory of murder, in answering the questions of the circular letter wrote as follows *In regard* to the case stated in your circular received today, I think the existence of two such wounds is conclusive against the idea of suicide The order of the wounds is not so clear The murderer may have fired the first shot from some distance and then advanced and fired again, holding the pistol close to the front of the chest, in which case the victim would probably have been lying on his back when found Or, firing first very close, he may have fired again at the victim's head as he was going away Either of the wounds would, I think, have prevented the self-infliction of the other

Dr D Hayes Agnew, of Philadelphia, wrote If you will read my letter over carefully you will discover I use no such language as you credit me with saying I have never said that the case was one of suicide or of murder, for of that I do not know I have said, and say again, that if the conviction of the prisoner is based entirely on the fact that a man cannot shoot himself in the head and in the heart, or vice versa, with his own hand, he will be unjustly convicted More than this I cannot say until I have heard both sides of the question What little has been communicated to me *differs in several respects* from the statements which you have furnished My informants may be in error, or there may be points which have been withheld from yourself

Many surgeons and physicians in replying stated that suicide was *possible* but not probable, but many more refused to send any reply One well known editor wrote I invariably dodge expert questions, knowing that "things are not always what they seem" In this case they seem very much like a brutal murder, but further deponent sayeth not

With one or two exceptions only, no letters sustaining the suicide theory were received

The following medical gentlemen appeared for the State, and sustained me in every theory advanced in the circular letter already referred to Prof F. W Draper, Boston, Prof M H Richardson, Boston, Dr McClellan, Philadelphia, and Dr Palmer, of Providence Prof H R Storer also sustained throughout the theory of murder, and aided me greatly in the work by encouragement and advice, but declined to appear as expert It was greatly regretted that the services of Dr Fish, of Amherst, Mass , could not have been secured for the State

The objectors must admit that the pistol found, or some other pistol, must have been the means of expelling the fatal bullets Therefore, when the pistol was fired, either by the murderer or the suicide, it must have had a *position somewhere* Then place the pistol where it could send a bullet, without the explosion from the powder burning, singeing or staining the skin, and through the skull bones and brain Could a thick-set, clumsy man, unfamiliar with fire-arms, hold a pistol and fire it in any such position against himself as a suicide must have held it? Certainly he could not Then consider the other shot, first or second, as one may choose, this entered the left ventricle and passed through the heart, emerging at the apex Could such a man as already described hold the pistol to do this?

The writer is familiar with most of the cases brought forward by the defence to prove how tolerant the brain is of severe injury, notably "the case of the iron bar," as it has been termed, and which is so well known to the students of the Harvard school, and to most of those who will read this paper As stated in my circular, "It is not claimed that the brain wound was necessarily *fatal,* but would not a bullet wound penetrating the skull and traversing the brain cause an amount of unconsciousness, or at least confusion of ideas, for sixty or even one hundred seconds, sufficiently profound to prevent the suicide from immediately recocking the pistol and discharging it into his heart?" This a large number of prominent surgeons have answered in the affirmative

The question of the ability of a 22-calibre cartridge, when exploded, to burn hair, is settled in the affirmative by the very careful and complete experiments of Dr Palmer, of Providence, who used the same cartridges as found in the revolver, and the identical revolver supposed to have been used in the murder In every experiment he proved beyond a doubt that it was absolutely impossible for Burton to have held the pistol and inflicted the wounds without at the same time burning the hair and staining the surrounding tissue This fact alone must have *proved* beyond doubt the theory of murder as

the only one tenable in view of these conditions, as conclusively testified to by the medical examiner and other competent medical witnesses This absence of burned hair or staining was one of the first facts obtained by me in determining that it was a case of murder

The records of the Surgeon-General's office and the experience of surgeons prove beyond a doubt that the usual result of a severe penetrating bullet-wound of the head is a certain amount of immediate unconsciousness, evidenced usually by a fall The remarkable exceptions are not to be used as evidence to support the theory of suicide As Prof Bigelow has stated, the *burden* of proof rests with the advocates of the suicide theory It is for them to prove suicide The State should not be put on trial to defend a position so reasonable, but *the defense must prove* that the reception of a penetrating bullet-wound of the skull and contents is not necessarily followed by unconsciousness The overwhelming evidence of the past fifty years of surgical history demonstrates to the unbiased observer that Mr Burton could not have inflicted upon himself the wounds which destroyed his life Such evidence cannot be gainsaid or resisted, and how it can be answered differently it is hard for me to understand

In the case of Sergt Rinn two shots were fired at the head, entering the scalp within two inches of each other Is it probable that a suicide would select two places so near together? The bullets which struck Sergt Rinn's head were large and came from a powerful British bull-dog pistol These bullets must have struck the head with terrific violence, since when discovered by the knife at the post-mortem they were found to be flattened to a remarkable extent Is it reasonable to suppose that after two such staggering blows this man could shoot himself in the heart? Was not the placing of the hand mirror a mere subterfuge to suggest suicide and hide the murderer?

It was claimed by the defense that suicides very commonly select the head as a target for the suicidal shot However much truth there may be in this statement, it must be equally true that when such a wound is inflicted powder stains or burning must necessarily follow, but the main objection to the argument in connection with the Burton case is, that *immediately* after accomplishing this penetrating pistol-ball wound of the brain the supposed suicide was able to accurately place, hold in position and discharge for the second time the pistol sending the ball into the heart This is, in all human reason, an impossibility, and not *one case* can be brought forward to illustrate this extraordinary theory The defense asks us to believe too much, forgetting that the burden of proof rests with them and *not* with the State But when within a few moments of the murder it was discovered by at least one competent surgeon that no burning of the hair or staining of the flesh had taken place, and at the same time, if a case of *suicide*, the pistol was obtainable for inspection, then the suspicion of murder should have increased to such an extent as to lead to the immediate decision of a premeditated homicide, and should have demanded immediate action by the police authorities

The question of the amount of *time* after the receipt of a wound in the brain, before unconsciousness would ensue, has provoked very much discussion It seems to me that in ninety-nine cases in a hundred there is more or less immediate shock, varying all the way from slight bewilderment and loss of reasoning to absolute loss of sense This is one of the most important questions connected with the case, and the plea of "possibility" is the plea only of *possible exception*, which in point of fact only proves the rule.

Considering the facts as stated, is not this very clearly and beyond doubt theoretically a *case of murder?* Practically it terminated as follows Maria Dorsey, the elder daughter, completely broke down upon the evening following the expert testimony for the State To a friend she said that the testimony of the five medical experts was more than she could endure, and so gave up a full confession The senior counsel abandoned the case, the jury soon brought in a verdict of guilty for both Maria and her husband, Allen W Dorsey, and they were promptly sentenced to State's Prison for life, the extreme penalty in Rhode Island To complete the case, Dorsey himself confessed his awful crime, and so the famous case ended

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A CASE OF EPILEPSY APPARENTLY CURED BY CORRECTION OF HYPERMETROPIA AND RELIEF OF CILIARY SPASMS

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY G E FROTHINGHAM, M D,

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I am led to report the following case not for the purpose of advocating any theory, but by a sense of duty to record a fact that may add to the statistical data to which appeal must be made in settling the question as to how important a part, eye-strain plays in the etiology of nervous affections This subject has been a mooted one for several years, by some condemned as of little importance, but by its originators and supporters pressed as one of the most important factors in the production of various nervous diseases, even as frequent cause in the production and maintenance of epilepsy and insanity, the most exalted manifestations of nervous disturbance, and the least curable by medication Believing, with Hoffman, that there is no escape from the labyrinth of doubt created by controversy, except by carefully and diligently consulting the records of cases, I have concluded to contribute this mite to the great whole by which we can only settle this question As it has been now more than three years since the last manifestation of disease, we may claim that the cure is permanent, whether or not it is due to the means that apparently effected it or not The following is a brief account of the case

An April 22, 1884, I was consulted by Miss E J L , aged 24, daughter of Rev V L L , then residing in Ann Arbor, Mich She came to consult me con-

cerning epileptic spasms with which she was afflicted, and also about some visual disturbances that had always given her trouble Her father, who accompanied her, gave the following history of the case She was an unusually healthy child until her eleventh year, when she was very suddenly attacked with a convulsion lasting about five minutes, after which she lay in a deep sleep for between one and two hours, from which she awoke apparently all right The family physician thought the attack due to intestinal worms, and gave some remedies based upon this view In about a month another spasm of the same kind occurred, and for sometime thereafter, they occurred monthly, or varying not more than one or two days from that period This regularity in occurrence led the physician to believe that possibly it was a case of premature menses, and that some obstructions to the escape of the discharge caused the irritation that produced the spasms, which were all of an epileptic character The limbs were drawn up, head bent backward, the teeth firmly set, the tongue often bitten, until, after awhile, the premonitory symptoms being recognized, a cork was inserted between the teeth and the injury to the tongue thus prevented There was frothing at the mouth and general convulsive movements The spasms were not preceded by an outcry, but in every instance there was, just before the convulsions, dizziness, color seeing and flickering before the eyes If these symptoms continued more than a few minutes a spasm occurred These symptoms occasionally appeared for a minute or so at a time without being followed by the epileptic spasms, but they always preceded the spasms, and a persistent attack of this kind was the means by which the patient was able to foretell a convulsion

When the patient was about twelve years of age Dr Lewis A Sayre, of New York, was consulted He examined the patient carefully, and concluded, that the spasms were due to some gastric derangement, or to some pre-catamenial derangement of the nervous system, and that they would probably disappear after a sufficient lapse of time Bromide of potassium was prescribed and, after awhile, Brown-Séquard's method of treatment was adopted and faithfully carried out The spasms could be controlled for a time, but, in a few months would return as before, and all remedies became ineffectual After the brief respites afforded by remedies, the convulsions would recur with more violence than before The bromides of potassium and sodiums were used until the nervous system became much depressed and the health and strength greatly impaired The patient was not only weak and languid, but became greatly reduced in flesh

When fourteen years of age Dr Wm A Hammond was consulted, and after a critical examination, including an ophthalmoscopic examination, concluded that the trouble was due to congestion, or other disease, of the base of the brain He gave an unfavorable prognosis, but recommended the use of nitrate of silver, which the parents objected to and it was never given

From the age of fifteen to eighteen, the patient was under the care of Dr A L Turner, of Bloomsburg, Pa, who was able, by his remedies, to keep the spasms off longer than had been accomplished by any previous method, but did not effect a cure, while the bromides used by him, as a part of his treatment caused much depression and enfeeblement She next came under the care of Dr E I Dunster, of Ann Arbor, Mich, who omitted, for awhile, the depressing medicines and gave tonics The spasms were even less frequent than before but still continued up to the time she consulted me, April 24, 1884 She was at that time spare and anæmic, with an anxious troubled expression of the countenance, and had the appearance of being older than she really was The menses were regular and the convulsions seemed to have no connection with this function There were occasional headaches, and symptoms of asthenopia, though not very severe An examination of the eyes showed the vision of each eye normal ($\frac{20}{20}$) and manifest hypermetropia varying from 0 50 to 0 75 D in both eyes alike There was no insufficiency of either the external or internal recti, or any abnormal relation existing between the external muscles that could be detected An ophthalmoscopic examination showed a normal condition of each fundus, but a total H much greater than shown by the subjective test The patient accepted a + 1 50 D S for each eye in reading, and experienced a feeling of relief and comfort in using them

April 26, the accommodation was paralyzed and a total hypermetropia of 2 D was found to exist in each eye The corresponding glasses were prescribed, the atropine continued, with directions to omit it after two weeks, and after another two weeks to gradually resume the use of the eyes by Dyer's method The period of rest was, however, inadequate, for on June 9 the patient returned and I found the manifest hypermetropia varying between 0 75 D and 2 D, which latter was the total amount There had been no return of the epileptic convulsions since the first examination, and the patient was feeling some better I directed a more prolonged use of the atropia, reduced the strength of the glasses to + 1 50 D and directed a return to the use of atropia whenever these should blur distant vision I also gave the usual directions for easy use of eyes

I did not see the patient again as she went East, and I did not hear anything more of the case until Nov 26, 1886, when the father wrote me from Bloomfield, N J, his present home, as follows "I am prompted to write you a few lines about our daughter Emily, which I thought might be of some interest to you professionally You will recall that for years she was troubled with spasms, preceded by color seeing, flickerings and dizziness We tried many physicians both East and West, among them were Dr Lewis A Sayre, and Dr Wm A Hammond, of New York The relief was only partial and temporary, meantime by the use of bromide of potassium, and like sedatives and antispasmodics, she was constantly feeble Dr Dunster prescribed for her as well as yourself, but you said that some claimed that these troubles originated in, or were continued and aggravated by certain abnormal conditions of

the eyes, and you made an examination and advised the immediate and constant use of glasses, and a discontinuance of the bromides of potassium, sodium, etc Well, before we left Ann Arbor, a marked improvement was observed—strength returned, she gained in flesh, and was in every way better, and now, during some two and a half years, she has never had a spasm, the color seeing is *very* seldom, and she is so fleshy and well you would hardly know her She has taken no medicine in two years Now I am inclined to think the glasses were the remedy, and I thought it might confirm your judgment in such cases, and be gratifying professionally, to know the result"

On Feb 12, 1887, in answer to some inquiries, I heard from this patient, and the improvement had still continued as at the date of the letter above quoted Considering this lapse of time, we are justified in regarding this case as apparently cured, and from the history it would seem that the cure was effected by the correction of an existing hypermetropia I have not been investigating in this direction, and had it not been for the thoughtfulness of the father of this patient I should never have known the result

It is several years since the attention of the profession was called to the connection which some claimed to exist between errors of refraction and nervous diseases, such as chorea, epilepsy, etc The views promulgated by some of the early writers on the subject were generally rejected as extreme, and this has been my own view in regard to them The possibility that they may have been *too lightly* estimated, is sufficient excuse for continued agitation of the subject, and for the collection of *every* fact that may tend to aid in its investigation and settlement

On March 1 of the present year Dr Geo T Stevens read, before the New York Neurological Society, a paper entitled "Irritation Arising from the Visual Apparatus Considered as Elements in the Genesis of Neuroses" He reported a series of most remarkable cases, in which the correction of slight errors of refraction, or the relief of insufficiency of some of the recti muscles, had caused immediate improvement in patients demented by epilepsy, which had resulted, as he believed, from the eye strain He cites cases of insane patients at the Willard Asylum, who were considered incurable, that were apparently benefited by this method of treatment Fourteen patients were treated by him Ten of these were insane and demented epileptics These patients were found to be suffering from insufficiency of one or the other of the recti muscles, and were operated on by him for its relief During the month preceding the operations these patients, collectively, had 170 convulsions During the month following the operations these patients, collectively, had only about 40 attacks, and this, notwithstanding the withholding of bromides Such facts should at least command attention, and did receive due consideration by the distinguished gentlemen present None of those who participated in the discussion, except one, could cite personal experience corresponding with that quoted by the author of the paper, and many were inclined to combat the extreme views advocated therein All agreed, however, that a complete examination of the eyes, including their refraction and the condition of the external muscles, should be made in all nervous affections

Dr Stevens declared in his paper that, as a result of an analysis of over 5,000 cases of nervous diseases occurring in his private practice, besides a considerable number in public institutions, he had come to the conclusion that "difficulties attending the function of accommodation, and of adjusting the eyes in the act of vision, or irritation arising from the nerves involved in these processes, are among the most prolific sources of nervous disturbances, and, more frequently than other conditions, constitute a neuropathic tendency" Granting that his experience is exceptional, and his views extreme, may there not be more in this theory than is generally believed, even by oculists Neurotic patients generally come under the care of those who give their attention to general practice, or who confine their practice to nervous diseases, and by them the condition of refraction and the relation of the external muscles are often too lightly investigated By many it seems to be ignored, and the paper of Dr Stevens, above referred to, has been characterized editorially in a leading journal as a "narrow specialism," and not long since, when a case was reported in one of the medical societies of some nervous disease cured by properly fitted spectacles, the editor of the journal containing the report volunteered the remark that "no well educated physician of the present day would make such a claim"

Peripheral irritation, as from tapeworm, etc, has long been recognized as a cause of epilepsy, but it has generally been held that when the *status epilepticus* has once become established by any of these peripheral causes, the removal of the cause does not cure the malady Numerous cases can, however, be found in modern medical literature that tend to discredit this view Epilepsy has been observed to disappear after the removal of various sources of eccentric irritation, such as the removal of a diseased knee joint,[1] the relief of preputial irritation,[2] the restoration of a prolapsed rectum,[3] the restoration of a retroverted uterus,[4] the removal of carious teeth,[5] and by the enucleation of a diseased eye[6] We can hardly consider these cures of epilepsy, which had existed for ten years in some of these cases, as the mere result of the traumatism inflicted by the operative procedure, as was suggested by Dr Seguin in discussing Dr Stevens's paper,[7] but it must be regarded as due to the removal of a source of eccentric irritation, which in some cases is the exciting cause of the epileptic spasms This peripheral irritation may exist in any part of the body, but we can readily conceive that excitement, strain or irritation

[1] Med and Surg Reporter 1883, No 48 p 26
[2] Mississippi Valley Medical Monthly 1883 vol iii, p 120 Also see case, Phila Med Times February 19, 1887, p 342
[3] Medical Record, March 22, 1884 from London Med Record, January 15, 1883
[4] Medical Record, September 3, 1881, p 22
[5] Am Jour Med Sciences, January, 1870
[6] Medical Record, vol xx p 722 from Chicago Medical Examiner
[7] New York Med Journal, April 16, 1887, p 443

in *some parts* may more readily produce these derangements than excitement or irritation in some other portions of the body, just as excitement or irritation of the parts supplied by the glosso pharyngeal nerve more readily excites the vomiting centre than irritation in other parts, though several portions of the body seem quite intimately connected with this centre Has the eye a similar connection with the coordinating and motor centres? and is eye strain, as claimed by some, "among the most prolific sources of nervous disturbance, and, more frequently than other conditions, constitute a neuropathic tendency?"[8] This is a question worthy of investigation and answer

Dr Chas A Oliver recently published an analysis of the ocular symptoms obtainable in epilepsy in the male adult [9] He based his conclusions upon the examinations of fifty male adults, of American stock, inmates of the State Hospital for Insane at Norristown, Pennsylvania All were epileptics In his ninth conclusion he says "The presence of insufficiency of the interni in the majority of cases is readily explained by association with existing H + Ah, and probably has no relation with the epileptic condition " In the light of the report made by Dr Wise, of the Willard Asylum, to Dr Stevens, as to the apparent benefit following his operations in similar cases, are we prepared to accept Dr Oliver's conclusion, above quoted, without further investigation?

Ferrier, in the second edition of his great work on "The Functions of the Brain," issued last year, discards his former view, which located the visual centre in the angular gyrus, and he now locates it in the occipito-angular region He declares that, though the cerebellum is not essential to sight, it has intimate relation not only with the optic, but also with the oculo-motor nerves, as is shown by the importance of visual impressions on the mechanism of equilibration, and by the relation between oculo motor and general motor adjustments, demonstrated by experiments The superior cerebellar peduncle is suggested as the probable medium of communication of optical impressions with the centres of equilibration [10]

The hope that the report of the above case might excite some discussion, and lead to the relation of experience and expression of the views entertained on this subject by the members of the Society, is the excuse for its presentation here

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CONSERVATIVE DENTISTRY

Read in the Section on Dental and Oral Surgery, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887,

BY A E BALDWIN, M D , D D S ,
OF CHICAGO, ILL

I have chosen for the subject of my brief paper " Conservative" or " Preservative Dentistry," and my only apology for presenting such a paper as this, is the hope that it may draw out some discussion, and do something toward clearing the minds of many general practitioners of medicine from fallacies, inherent from a lack of a proper appreciation of this subject and a prejudice which many of them must have obtained from the constant rantings and railings about the lamentable ignorance of the Doctor of Medicine, by some of the would-be lights of the dental specialty I will be excused in the light of the above in making this paper deal largely in generalities, thinking by thus doing that the mind of the general practitioner may enlarge upon these generalities, and through them we may hope to enlighten the laity, who are, as a rule, willing to do anything which their physician recommends or which they can believe is for their good, especially in regard to their physical condition

I think I am not stating it in too strong language when I say, that if there is one factor more than another that brings the people to the physician it is the troubles arising from indigestion It assumes a variety of forms, and is almost always largely owing to the condition of the teeth

This matter is fully as important in the child as in the adult (and to my mind much more so) Take the child, for instance, from four to twelve years of age, growing rapidly, the amount of nutrition furnished must be largely in excess of that necessary (in proportion to size) for the adult, for they have not only to assimilate a sufficient quantity to make up for the waste, but also for the great development and growth in, and of the tissues How often do we see the child with decayed teeth, nearly or quite exposed or dead pulps, and these unattended to, makes him very careful of masticating food the consequence is the food is imperfectly commingled with the saliva, and goes into the stomach in a solid instead of a pulverized condition, the stomach is overworked, the system is underfed, and these things tend to develop a nervous, hypersensative condition of the organisms of the body, and especially of the nervous system, and we see them illy nourished, thin, nervous and weak, and with that worst of all habits formed for life, of never using the teeth save to get the food in a condition to be swallowed And then oftentimes when the child's tooth gives him a little trouble, the parent takes him to the family physician who extracts the abused tooth and thus paves the way for irregularities of the permanent teeth, instead of explaining what is necessary, *i e*, to take him to the family dentist and have the tooth or teeth put in good repair, to require at least semi annual visits that they may be kept in such a condition that mastication can be performed painlessly, and the space occupied by the temporary teeth maintained until the eruption of the permanent tooth to take its place—for should it be extracted, it is a well known fact that the remaining teeth tend to close the space occupied by the tooth, and thus the permanent tooth must be erupted in an abnormal position Should the above be carefully followed, I think much of the decay and suffering from the teeth later in life would be obviated, and the system kept better nourished, the stomach not overworked and the general condition much improved

[8] Geo T Stevens M D N Y Med Jour April 16 1887 p 422
[9] See Philadelphia Med Times February 5, 1887 p 306
[10] Ophthalmic Review, April 1887 p 124

And what I hold to be true of children is in a large sense true of adults, and I know there are many general practitioners who are as thoughtless of the outcome, in the matter of the teeth, as I was when in the general practice, often then extracting or advising the extraction of a tooth when by so doing I was doing the patient an incalculable amount of harm While I do not mean to be understood as advocating the doing away of the forceps entirely, yet I think a rule might be formulated something like this—"No tooth or good root of a tooth should ever be extracted if it is in a position where if sound, it would be serviceable" Of course, this is not an invariable rule but the exceptions would hardly be noticeable

Many of you may recall the acrimonious discussion in and out of the *Medical Record* of a short time ago in regard to leaving in the mouth of pulpless teeth, especially after an abscess had formed at the root But I think a quiet examination of the subject will develop the fact that if the inside of the tooth, *i e* the pulp chamber and the canals, are thoroughly desiccated and then filled with an indestructible and non-irritating material that the tooth remains as inoffensive to the tissues near to and far removed as though it were perfect as nature formed it

Oftentimes, in medicine as in other things, guess work or tradition compels innocent things to be pronounced guilty, and I think the cases are very rare where trouble in other tissues may be traced even indirectly to a well treated pulpless tooth I know I am taking grounds that may be criticised by some, but when reflected upon I think they will be very generally accepted

Now, in regard to the tooth and the surrounding tissues, or connections with other organs These connections are of nerve tissue and the circulation by which the pathological condition can be communicated, and in the devitalized or pulpless tooth the troubles are caused, as I suppose, by the putrefaction of the confined tissues with the formation of irritative gaseous products, and these being compelled to escape, must escape at the apical foramen of the root, and this causes irritation of the peridental membrane and inflammation, exudation and suppuration following from what is known as an abscessed tooth Many physicians and, I am sorry to say, very many dentists too, here think the proper treatment is to extract, but I, in common with most of the dental specialists, hold as according to the teaching of Prof Allen, of Rush Medical College "Having found what was the matter and the cause, remove the cause,"—not the tooth, for that was not the cause, the cause being the irritation induced by the confined gases, give these gases an opportunity to escape by freely opening into the pulp chamber, remove as thoroughly as possible the putrefying débris, dry or dessicate the pulp chamber and root canals I think, as a rule, disinfection is not necessary, as the thorough drying is a perfect disinfection, and then having accomplished this, to fill the root canals with a material that is of itself non-irritating and not affected by any of the fluids of the system, and the material *par excellence* is a thick solution of base-plate gutta-percha dissolved in chloroform This, pumped into the root canals and forced to the apical foramina, entirely removes the cause for any further irritation Many dentists, I know, claim this can be accomplished better by other means, but I am confident the majority of cases of failure of this treatment is in not having the canals thoroughly dried, and as this material shrinks in drying, if the walls are not thoroughly dried, the shrinkage is *from* the walls, allows infiltration of fluids into the canals, and an undesirable result follows

I am willing to affirm, that a tooth with canals *thoroughly* dried and filled with the solution of gutta-percha in chloroform will never again give trouble from irritation, save from some external condition of tooth which, may or may not exist entirely independent of the fact as to whether the tooth has a living or dead pulp

And to illustrate the external causes which may act, I mention a case that came to me some eighteen months ago, with the request to examine a tooth which had troubled him for years and had been treated by some of the most skilful dentists in the West with no relief After a careful examination I told him I could do nothing of benefit to him save to extract the tooth In spite of the much-vaunted ability of some men to relieve all such cases, I think this was clearly a case where relief could only be obtained by the removal of the tooth, a lower left first molar The anterior root being entirely encrusted with a thick deposit of tartar, this extended all about the root, clear over the apical foramen of the root and up between the roots to the top of the arch, and partially down the other root on the inside Now, why was not this condition recognized and treated properly a long time before, at a great saving of time and money to the patient? I can conceive of only one reason, and that was, the mind of the dentist was so bent on demonstrating a theory that the interest of the patient was not thought of

Some of us are so taken up with seeking myths from and in materia medica that they are imposing many ridiculous things on us, giving us more chaff than wheat, forgetting that first a thorough, unbiased examination and clear demonstration of its value, should precede the foisting of it upon the profession, and while for a few years, perhaps, we should be denied the infliction of so many voluminous papers of trash on dental materia medica, yet progress would be safer and more sure And another prominent dentist is constantly pressing on the profession theories, many of which have been exploded years ago by the medical profession as of no value, and nearly (if not quite) all are simply theories, with no clear demonstration of the facts as applied to our work I think the greatest of the faults in the dental ranks is that we do not do enough original thinking, we are too apt to let one doctor or another do the thinking for us, and do not depend enough upon ourselves—if we did we should not be so ready to receive and embrace false doctrines As it is now, if any question comes up, the mass of the profession first want to learn what Dr So-and-So thinks, not stopping to con his reasons (if he has any) for his ideas, and at once adopts them as his own

As an illustration of the way we should do, I have only to refer to the story of the young artist who, meeting the old and celebrated artist, inquired of him how he mixed his paints to produce the harmonious blending of colors in his pictures, and was astonished at the (clear) reply of the artist "I mix them with brains" Could we get this little truth established in our minds, and ere we do anything, use our brains as to the cause and the remedy, we should soon be more in a condition of scientific progress and have many less theories

It is much easier for us to see faults in our brother, the general practitioner, than to see the much greater faults in ourselves, and if we can get the general practitioner to simply apply the same rules in his reasonings in regard to the dental tissues as in those that he is oftener called to treat, and to recognize that the abscessed or pulpless tooth is *not* a dead tooth at all, but simply one that by proper treatment can be made a good and serviceable instrument for mastication, the writer of this paper will be gratified beyond measure

MEDICAL PROGRESS.

Metrorrhagia at the Time of Puberty —In an article on this subject Dr Henry C Coe says

As regards the treatment, I can only add that it should be largely expectant, since the hæmorrhage tends to cease spontaneously Absolute rest in the recumbent posture, with the avoidance of all disturbing influences, is generally sufficient The patient ought not to be allowed to get out of bed for the purpose of emptying the bladder or bowel, neither should be permitted to become distended, since this tends to increase the hæmorrhage On the other hand, violent purgation is equally to be avoided, since it augments the pelvic congestion

As regards drugs, the fluid extract of *Hydrastis canadensis* has been highly recommended in uterine hæmorrhage, but it did not seem to act so well in this case as ergot I have not met with such good results from the use of aromatic sulphuric acid as others Since the hæmorrhage in these cases is an expression of the general pelvic congestion, it is a question if, by endeavoring to promote uterine contractions, and hence local anæmia, we do increase the existing hyperæmia in the pelvic vessels The conditions in the case of a virgin and in that of a multiparous uterus are manifestly different

As regards the application of cold to the abdomen, as recommended by German writers, it is to be noted that this agent should not be employed indiscriminately I should not have ventured to use it in this instance if I had not been sure that the hæmorrhage was not the true menstrual flow Even then the ice-bag was left *in situ* for only half an hour at a time Its use in such a young patient during the period might be productive of harm, by modifying unnaturally the normal hyperæmic condition of the pelvic organs, just as sometimes occurs in consequence of a cold bath at that time

Vaginal injections are always extremely distasteful to a young girl, and, in consequence of the anatomical condition of the parts, they cannot be given thoroughly If employed at all, they should be administered slowly, and should be non irritating The amount of water and the force of the stream must necessarily be smaller than would be used in the case of a multipara A simple astringent, such as alum, is preferable It is a question if they accomplished much good in the case described, they were, at least, not productive of harm

To summarize Metrorrhagia at the time of puberty is not necessarily pathological, and rarely calls for local treatment If dysmenorrhœa is absent, if no general cause can be discovered, and the patient is not profoundly affected by the loss of blood, the chances are that the condition is temporary, and that it will cease when she is placed under proper hygienic conditions, which conditions can only be determined by experiment Treatment should be mainly expectant, while vaginal examinations are rarely necessary —*N Y Medical Journal*, August 27, 1887

The Cerebro-Spinal Fluid —Falkenheim and Naunyn agree with Bergmann in regarding the cerebro spinal liquid as a true secretion from the plexus choroidens and not a simple transudation The normal subarachnoidal pressure is from 7 5 to 12 mm of mercury in a strong dog The amount of fluid secreted varies much in different dogs, from 1 ccm in 6 minutes to 1 in 40 minutes The secretion is not dependent on the blood pressure nor on the size of the animal, although the resorption of the fluid is An increase in the pressure of the cerebro-spinal fluid may result from an increase of the arterial or venous blood pressure, since the resorption of the fluid cannot compensate for the effect of raised blood pressure

The authors believe that under circumstances of disease an increase of subarachnoidal pressure leads to symptoms of pressure on the brain only through anæmia of the brain, is the result only of overcoming the usual blood pressure in the brain-vessels They believe that symptoms of such pressure arise only under very peculiar circumstances when due to an increased secretion of fluid, but that they arise readily from disturbance of resorption The pressure necessary to produce symptoms is not a constant one, but depends upon the pressure within the vessels of the brain —*Centralbl fur klin Med*, No 33, 1887

Nitroglycerine in Nephritis and Uræmia — Dr S A Lentovsky, of the Cronstadt Marine Hospital, employed nitroglycerine (in tabloids containing each 1-100th of a grain of the drug) and hot water baths in four cases, three of which are given with minute details In two of the patients the daily amount of urine rapidly increased, while albuminuria and dropsy disappeared and the patient's subjective feeling and general state strikingly improved In a third case the improvement was but fleeting, the patient dying after a short stay at the hospital The

And what I hold to be true of children is in a large sense true of adults, and I know there are many general practitioners who are as thoughtless of the outcome, in the matter of the teeth, as I was when in the general practice, often then extracting or advising the extraction of a tooth when by so doing I was doing the patient an incalculable amount of harm While I do not mean to be understood as advocating the doing away of the forceps entirely, yet I think a rule might be formulated something like this—" No tooth or good root of a tooth should ever be extracted if it is in a position where if sound, it would be serviceable " Of course, this is not an invariable rule but the exceptions would hardly be noticeable

Many of you may recall the acrimonious discussion in and out of the *Medical Record* of a short time ago in regard to leaving in the mouth of pulpless teeth, especially after an abscess had formed at the root But I think a quiet examination of the subject will develop the fact that if the inside of the tooth, *i e* the pulp chamber and the canals, are thoroughly desiccated and then filled with an indestructible and non-irritating material that the tooth remains as inoffensive to the tissues near to and far removed as though it were perfect as nature formed it

Oftentimes, in medicine as in other things, guess work or tradition compels innocent things to be pronounced guilty, and I think the cases are very rare where trouble in other tissues may be traced even indirectly to a well treated pulpless tooth I know I am taking grounds that may be criticised by some, but when reflected upon I think they will be very generally accepted

Now, in regard to the tooth and the surrounding tissues, or connections with other organs These connections are of nerve tissue and the circulation by which the pathological condition can be communicated, and in the devitalized or pulpless tooth the troubles are caused, as I suppose, by the putrefaction of the confined tissues with the formation of irritative gaseous products, and these being compelled to escape, must escape at the apical foramen of the root, and this causes irritation of the peridental membrane and inflammation, exudation and suppuration following from what is known as an abscessed tooth Many physicians and, I am sorry to say, very many dentists too, here think the proper treatment is to extract, but I, in common with most of the dental specialists, hold as according to the teaching of Prof Allen, of Rush Medical College "Having found what was the matter and the cause, remove the cause,"—not the tooth, for that was not the cause, the cause being the irritation induced by the confined gases, give these gases an opportunity to escape by freely opening into the pulp chamber, remove as thoroughly as possible the putrefying débris, dry or dessicate the pulp chamber and root canals I think, as a rule, disinfection is not necessary, as the thorough drying is a perfect disinfection, and then having accomplished this, to fill the root canals with a material that is of itself non-irritating and not affected by any of the fluids of the system, and the material *par excellence* is a thick solution of base-plate gutta-percha dissolved in chloroform This, pumped into the root canals and forced to the apical foramina, entirely removes the cause for any further irritation Many dentists, I know, claim this can be accomplished better by other means, but I am confident the majority of cases of failure of this treatment is in not having the canals thoroughly dried, and as this material shrinks in drying, if the walls are not thoroughly dried, the shrinkage is *from* the walls, allows infiltration of fluids into the canals, and an undesirable result follows

I am willing to affirm, that a tooth with canals *thoroughly* dried and filled with the solution of gutta-percha in chloroform will never again give trouble from irritation, save from some external condition of tooth which, may or may not exist entirely independent of the fact as to whether the tooth has a living or dead pulp

And to illustrate the external causes which may act, I mention a case that came to me some eighteen months ago, with the request to examine a tooth which had troubled him for years and had been treated by some of the most skilful dentists in the West with no relief After a careful examination I told him I could do nothing of benefit to him save to extract the tooth In spite of the much-vaunted ability of some men to relieve all such cases, I think this was clearly a case where relief could only be obtained by the removal of the tooth, a lower left first molar The anterior root being entirely encrusted with a thick deposit of tartar, this extended all about the root, clear over the apical foramen of the root and up between the roots to the top of the arch, and partially down the other root on the inside Now, why was not this condition recognized and treated properly a long time before, at a great saving of time and money to the patient? I can conceive of only one reason, and that was, the mind of the dentist was so bent on demonstrating a theory that the interest of the patient was not thought of

Some of us are so taken up with seeking myths from and in materia medica that they are imposing many ridiculous things on us, giving us more chaff than wheat, forgetting that first a thorough, unbiased examination and clear demonstration of its value, should precede the foisting of it upon the profession, and while for a few years, perhaps, we should be denied the infliction of so many voluminous papers of trash on dental materia medica, yet progress would be safer and more sure And another prominent dentist is constantly pressing on the profession theories, many of which have been exploded years ago by the medical profession as of no value, and nearly (if not quite) all are simply theories, with no clear demonstration of the facts as applied to our work I think the greatest of the faults in the dental ranks is that we do not do enough original thinking, we are too apt to let one doctor or another do the thinking for us, and do not depend enough upon ourselves—if we did we should not be so ready to receive and embrace false doctrines As it is now, if any question comes up, the mass of the profession first want to learn what Dr So-and-So thinks, not stopping to con his reasons (if he has any) for his ideas, and at once adopts them as his own

As an illustration of the way we should do, I have *only to refer to the story of the young artist* who, meeting the old and celebrated artist, inquired of him how he mixed his paints to produce the harmonious blending of colors in his pictures, and was astonished at the (clear) reply of the artist "I mix them with brains" Could we get this little truth established in our minds, and ere we do anything, use our brains as to the cause and the remedy, we should soon be more in a condition of scientific progress and have many less theories

It is much easier for us to see faults in our brother, the general practitioner, than to see the much greater faults in ourselves, and if we can get the general practitioner to simply apply the same rules in his reasonings in regard to the dental tissues as in those that he is oftener called to treat, and to recognize that the abscessed or pulpless tooth is *not* a dead tooth at all, but simply one that by proper treatment can be made a *good and serviceable instrument* for mastication, the writer of this paper will be gratified beyond measure

MEDICAL PROGRESS.

METRORRHAGIA AT THE TIME OF PUBERTY —In an article on this subject DR HENRY C COE says

As regards the treatment, I can only add that it should be largely expectant, since the hæmorrhage tends to cease spontaneously Absolute rest in the recumbent posture, with the avoidance of all disturbing influences, is generally sufficient The patient ought not to be allowed to get out of bed for the purpose of emptying the bladder or bowel, neither should be permitted to become distended, since this tends to increase the hæmorrhage On the other hand, violent purgation is equally to be avoided, since it augments the pelvic congestion

As regards drugs, the fluid extract of *Hydrastis canadensis* has been highly recommended in uterine hæmorrhage, but it did not seem to act so well in this case as ergot I have not met with such good results from the use of aromatic sulphuric acid as others Since the hæmorrhage in these cases is an expression of the general pelvic congestion, it is a question if, by endeavoring to promote uterine contractions, and hence local anæmia, we do increase the existing hyperæmia in the pelvic vessels The conditions in the case of a virgin and in that of a multiparous uterus are manifestly different

As regards the application of cold to the abdomen, as recommended by German writers, it is to be noted that this agent should not be employed indiscriminately I should not have ventured to use it in this instance if I had not been sure that the hæmorrhage was not the true menstrual flow Even then the ice-bag was left *in situ* for only half an hour at a time Its use in such a young patient during the period might be productive of harm, by modifying unnaturally the normal hyperæmic condition of the pelvic organs, just as sometimes occurs in consequence of a cold bath at that time

Vaginal injections are always extremely distasteful to a young girl, and, in consequence of the anatomical condition of the parts, they cannot be given thoroughly If employed at all, they should be administered slowly, and should be non irritating The amount of water and the force of the stream must necessarily be smaller than would be used in the case of a multipara A simple astringent, such as alum, is preferable It is a question if they accomplished much good in the case described, they were, at least, not productive of harm

To summarize Metrorrhagia at the time of puberty is not necessarily pathological, and rarely calls for local treatment If dysmenorrhœa is absent, if no general cause can be discovered, and the patient is not profoundly affected by the loss of blood, the chances are that the condition is temporary, and that it will cease when she is placed under proper hygienic conditions, which conditions can only be determined by experiment Treatment should be mainly expectant, while vaginal examinations are rarely necessary —*N Y Medical Journal*, August 27, 1887

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Hewitt says "I am aware of the disorganized condition of the department when you entered upon your duties, and I am convinced that you have done all in your power to bring order out of chaos Before the close of the present year I hope to be able to inform the people of New York that every tenement which is unsuited for healthy occupation of its citizens has been vacated I congratulate you on what you have done in this direction since you have been in office, but I cannot refrain from urging you to use all the means at your command to remedy the grievances which have been complained of and close up any house in this city which is not fit for human habitation "

Regulations in regard to plumbing and ventilation have also been adopted, and under these there is to be an entire abolition of what is known as the "school sink" in tenement houses, and the substitution therefor of water closets Provision has also been made for the use of extra heavy cast iron pipe in all cases, and the use of tarred iron pipe will not be allowed All closets must be connected with the outer air Among the other evidences of new vigor in the administration of the Health Department is the prosecution of a number of physicians for neglecting to report births and cases of contagious disease occurring in their practice

PATHOGENIC MICROORGANISMS IN SPUTA

In some investigations on this subject, the full records of which are published in the *Zeitschrift fur Hygiene,* Bd 2, 1887, D BIONDI took sputa from 50 persons, some in health, others ill, and injected it into animals When pathogenic results followed the tissues were searched for microorganisms, and these cultivated and isolated In this way he found 5 different kinds of microorganisms Of these the *Bacillus salivarius septicus* was found in 20 per cent of the sputa examined, and it was most abundant in the sputa secreted before mid day Dogs and mice into which 5–1 cc of such sputum was injected died in the course of 24 to 72 hours Before death there was usually fever, sometimes also continuous coma In some cases death did not take place till after the lapse of 30 days, the animals gradually emaciating, and the hair falling, etc After death œdema and hæmorrhage were found about the point of infection, as well as in the parenchymatous organs and serous cavities The spleen was swollen, and the microorganisms were found in the blood

Biondi made a careful examination into the biology of these bacilli They are short, elliptical rods, somewhat pointed at the ends He found that if the infected blood was used as a means of inoculating from animal to animal it was strongly pathogenic On the contrary, if the bacilli that had been grown on artificial culture media were used the pathogenic power diminished with the age of the culture It was also found that if the bacilli grown in artificial media were used as a vaccine material animals were protected from the more pathogenic material

Another form—the *Coccus salivarius septicus*—was found in the sputa of a patient who had puerperal septicæmia Mice, guinea pigs and dogs inoculated with it died in from 4 to 6 days The blood contained the cocci isolated or in small groups In the tissues they were found constantly in thick nest-like collections They did not cause purulent inflammation They grew rapidly on agar agar, gelatin, blood serum and bouillon, and did not render them fluid On potatoes and milk they grew poorly, and developed best at the temperature of the blood They also developed at a temperature of 18°–20° C

A third form—the *Micrococcus tetragones*—was found three times Animals infected with it died in from 4 to 8 days The most pronounced symptoms were great weakness and feebleness These cocci were found in unusual numbers in the blood and secretions, and in greatest numbers in the lungs They grow on all the usual culture media, and at the usual temperatures They are pathogenic to mice and guinea pigs, but not to dogs or rabbits The pathogenic activity of the cultures was not altered by their age

The *Streptococcus septo-pyæmicus*—the fourth form—was found three times in the sputa of persons who were ill (angina phlegmonosa, laryngitis, erysipelas) The sputa were pathogenic, but not constantly, in guinea pigs, mice and dogs The dogs generally died of a form of chronic septicæmia, and the guinea pigs and mice of a collection of pus found at the point of infection, which had a tendency to spread through the subcutaneous tissues and muscles This coccus grows on agar agar, bouillon, and potato It appears to be identical with the coccus of erysipelas, and of phlegmonous and puerperal sepsis

The fifth form—the *Staphylococcus salivarius pyogenes*—was found in an abscess produced by injecting beneath the skin of an animal sputa from a patient suffering from scarlatina anginosa Besides this, abscesses often developed at the point of injection, which contained staphylococci identical with the *aureus* and *albus* The *S salivarius pyogenes* differs from these in that it renders culture media fluid more slowly On agar agar the culture appears

whitish gold yellow, the *aureus* being deep red and the *albus* snow white On gelatin it frequently forms a membrane, which is not the case with the others It is very resistant to both high and low temperatures

THE OBSTETRICAL ADVANTAGES OF OTTER TAIL CO, MINNESOTA —Otter Tail, one of the frontier counties of Minnesota, bids fair to rival the Rotunda Hospital or the Allgemeine Krankenhaus of Vienna as a resort for aspirants for obstetrical advantages and greatness Dr T G Hutton, of Fergus Falls, writes us that there are now in that county living quadruplets one week old, living triplets eight months old, living twins born of a 16-year old mother, and a child 12 months old whose mother is now only 14½ years old It may be added, for the benefit of those who may hesitate between Vienna and Otter Tail Co, that the latter place is just as accessible as Vienna, and the cost of living is less The only reasonable objection to the frontier county is that the vernacular is English, nevertheless, it contains, we believe, a large number of Germans

SOCIETY PROCEEDINGS

ST LOUIS MEDICAL SOCIETY

Stated Meeting, April 30, 1887

THE PRESIDENT, S POLLAK, M D IN THE CHAIR

DR MEISENBACH presented a specimen from a

STRANGULATED OMENTAL HERNIA

The patient was a middle aged man On January 16 Dr Wesseler saw him suffering with a strangulated hernia, which he reduced The man had had hernia for the last seven or eight years—hernia of the left inguinal region After the reduction he neglected to wear his truss Five days after the first strangulation of the gut, while lifting, the intestine came out and became incarcerated Dr Wesseler attempted to reduce the hernia by taxis, failed, sent for me, and I failed to reduce it Under taxis the tumor became flaccid, and as the more urgent symptoms had been ameliorated, it was decided to wait till morning and see what development would occur During the night the patient's condition again became worse, the tenseness of the tumor increased, and vomiting occurred An immediate operation was advised The tumor was very tense, and there appeared to be some exudation, as on palpation there was marked resistance and that evidence of doughiness which is very difficult to describe, but which is very perceptible to the sense of touch The man was anæsthetized, the usual incision made over the tumor and an attempt made to reduce it without opening the sac When I thought I had reached the gut I found that I had only cut down to the sac, because upon making a very minute puncture, after trying in vain to reduce the hernia without opening the sac, I found there was an exudation of about three quarters of a pint of serum Even then it was impossible to reduce the tumor Upon opening the sac I found a coil of intestine within it, and an immense mass of omental tissue I finally succeeded in replacing the gut within the abdominal cavity The gut seemed to be still living, and in a condition which seemed to promise that it would live Its color was a deep cherry or wine color I returned it to the abdominal cavity, as there were no evidences of gangrene in any portion But when I came to the omental tissue I found that there was such an extensive coil, with strong adhesions present, that it was impossible to return it I attempted ligation and the dissecting off a portion of the tumor, but such hæmorrhage ensued that I desisted, being afraid to dissect off the adhesions to the walls of the ring for the same reason I could not get at the underlying tissues effectually enough to control the hæmorrhage that might occur, and I was afraid to cut off the omentum that was protruding and leave a stump that would probably cause the same danger, hæmorrhage into the abdominal cavity I concluded to leave the omental tissue within the sac or extruded from the sac, and suture the sac to the neck of the omental protrusion The patient for the first 24 hours seemed to be doing fairly well, but within 48 hours he died, I think from shock, because upon the autopsy we found the abdominal cavity free from serous and hæmorrhagic exudation, but that portion of the gut which had been entangled in the sac for over 12 hours was black, it had not broken down, there were no points of puncture, of rupture or signs of extravasation, but there was this first stage of gangrene I found all the parts surrounding the internal and external abdominal ring and in the line of the operation in good condition, there was no infiltration

If the operation had been performed six, eight or ten hours earlier could the man's life have been saved? Did the protrusion or the leaving of the omental tissues in the situation in which we left them have anything to do with the hastening of the collapse of the patient?

DR F J LUTZ mentioned a case of omental hernia in which he pursued a different course from that taken by Dr Meisenbach, the indications being different It was an umbilical hernia in a woman 35 or 40 years of age, who received an injury, some eight years ago, by falling on the ground and striking a piece of wood on her abdomen She was a very large woman, weighing about 200 pounds She then noticed a protrusion which gradually became larger and gave her much pain, the size and pain increasing There appeared to be no question as to the nature of it The feel of the tumor indicated that the bowel was not included There were certain symptoms, however, which had latterly appeared and which indicated that there was considerable traction upon the stomach, the mass of omentum in the tumor was so great, that whenever any kind of fluid

or even liquids which could develop gases in the stomach were introduced there was such an amount of traction and pain as to make the patient's condition unbearable The supposition was that possibly latterly a portion of the bowel or stomach had got into the sac No truss or appliance has ever reduced the tumor I opened the sac and at once came upon a mass of omentum, which appeared very much like a fatty tumor, so that when we have made an incision into them there were a number of fibrous bands extending and forming, as it were, separate cavities, which cavities were filled with the omental mass The sac appeared about the size of a man's fist, and yet probably three times as much omentum as would be represented by a man's fist was in the sac, so firmly and densely was it packed, and after unraveling the omentum it was seen to escape from an opening perhaps three-fourths of an inch in diameter, that it had been greatly enlarged and thickened, and was firmly adherent to the surrounding structures, so that it had to be dissected off On finding that the contents of the sac was omentum, the first suggestion was that this omentum should be reduced into the abdomen, and I succeeded at first in introducing a part of it, but afterwards I did not succeed in getting it into the abdomen Then the question of enlarging the opening through which the tumor escaped, was presented The objection was that I had not put my hand or any instrument into the abdominal cavity because I had checked the hæmorrhage at this period, nothing had been done to the sac except make an incision in the median line If I enlarged the opening I possibly could not succeed in keeping all the blood out, and as it would undoubtedly be necessary to manipulate, the contents of the bowel might escape also Then it seemed that if this woman had got on for so long a time without that omentum in her abdomen, because it was only latterly that any disturbance had occurred, possibly she would get along just as well afterward without it, I therefore, after reducing some of it, or as much as I thought would relieve the tension on the stomach, proceeded to ligate the mass with strong silk ligatures in three or four places, and cut off the remaining portion of the omentum The stumps were then readily reduced I then began to sew up the opening in the abdominal cavity by means of four interrupted sutures, which, however, only approximated the parts, and after that I removed the sac, leaving a ring of peritoneum outside the abdominal cavity, in other words, not cutting the sac off very close to the sutures, I left half an inch, and dressed the cavity, which was left after introducing a drain of sublimated gauze The patient is getting on very well

DR E H GREGORY said it had always been his rule to strangulate the omentum and cut it off just beyond the ligature and leave the remaining portion in the ring, not disturbing it at all, leaving it there in the hope that it may serve as a plug, or a sort of internal truss He never disturbs the adhesions of the omentum at all, but simply strangulates it, being very careful to unravel it, because occasionally when we think we have reduced the bowel completely we find nestling in the meshes of this omentum yet remaining a knuckle of intestine, and it requires a great deal of caution lest we might embrace a portion of the bowel in the ligature, so that it has been his rule to unravel the omentum as perfectly as possible, then ligate it, using three or four ligatures occasionally, but usually simply a double ligature, which enables me to embrace it in two loops, and then cut it off In a case like this I should certainly have recommended an excavated truss—a pad that was sufficiently capacious to have received this mass, and a resisting pad, one that would have prevented any increase of the tumor, and I should have hoped from the pressure of this pad, persistently used, to reduce the size of the mass, I should have hoped for this result, I have seen it happen, and I attach as much importance to the good results of an excavated pad as I do to the ordinary pad for keeping up a hernia If a pad be properly constructed, if it fit closely to the mass, it certainly prevents any additional protrusion of the mass No one who has an irreducible hernia ought to do anything which is likely to produce a protrusion, if he has a stricture it ought to be cured, because every effort at discharging the urine is apt to produce a fatal protrusion But I believe that circumspection under these circumstances, and properly fitting excavated pads, make these hernias almost as safe as ordinary hernias which are kept up

In regard to the intestine We have some rules in surgery One rule is that if there is a doubt in our minds as to the propriety of performing a surgical operation, we should give the patient the benefit of the doubt by not performing the operation Hernia forms an exception to this rule Where we have a protruding mass with urgent symptoms, or symptoms which suggest the propriety of surgical operation, the best way is to operate—to give the patient the benefit of the doubt by performing the operation, because the operation gives him a better chance than procrastination, so that when I have a case of hernia, if there is a doubt in my mind as to the propriety of an operation, I always operate That is my rule When I open the hernial sac and find the intestine changed, but intact, if I am in doubt as to the propriety of returning it, I put it back, if I am not, I leave it out, that is, if I am satisfied I should not return it I leave it out, because I am satisfied from the condition of the gut that it would be perilous in the highest degree to put it back, it is dead, and I certainly leave it out I cut it open and empty the contents of the intestine But whenever I am in doubt to put it back or not, I put it back, because it is then in the best possible situation to be restored—to have its vitality restored If left out, it will most probably die, if put back we will always hope that it will grow better, because then the intestine is at home An earlier operation in Dr Meisenbach's case would have been infinitely better, and must be infinitely better in every case of strangulated hernia to operate at once The question is, is a hernia strangulated? is it simply incarcerated? is the transit of its contents simply arrested, or is its circulation interfered with? Whenever there

is strangulation, the circulation of the part is arrested, the term includes the idea of a vital interference with the circulation, and whenever there is a strangulation, relief must be afforded as quickly as possible There being strangulation, there is no ground for the surgeon to stand on I always say to a patient before I give him the anæsthetic, I am going to give you an anæsthetic and put you upon the table, and when you wake up you may find that I have operated, because if I fail to reduce the bowel, I shall make an opening which will enable me to relieve this constriction I often succeed in reducing, but always have this sort of an understanding Generally the symptoms of strangulation are very distinct, unequivocal, of course there are exceptions, strange and mysterious as it may appear, a bowel may be fatally nipped without urgent symptoms, but as a rule there are urgent symptoms, and there can be no question about the propriety of an immediate action

Dr D V Dean said that Dr Meisenbach's case brought up one point that is likely to be the subject of some discussion in the near future, the matter of resection One of the younger surgeons of this city is preparing a paper in which he cites a considerable number of cases in which strangulation or incarceration existed quite a brief period of time and herniotomy was performed, and, death following, a post-mortem examination showed minute punctures or openings in the line of constriction of the bowel He asked me to look up my cases, and I found an account of a case in which an operation had been performed, and, in the report of the autopsy it was stated that minute openings were found In all my later practice, if the tumor do not reduce readily, I give an anæsthetic, and then if it do not reduce, perform an operation But this question of resection is one that is important to consider Of course it would not have saved the patient's life in Dr Meisenbach's case at the time he operated, for he died of shock I expected to hear that there were openings at the line of the constriction, and I was almost sorry this condition was not found But, if the patient had not died of the shock, he would have died from the results of gangrene of the bowel

Dr T F Prewitt thought the great mistake that is made in nine cases out of ten of strangulated hernia is that the operation is not performed early enough It is always safer to operate early with or without antiseptics It was before we had antiseptics, it is so now The danger to the patient of not operating is in proportion to the damage done the bowel I venture to say that in 99 cases out of a 100, if they are operated on even needlessly, and the operation was done properly and skilfully, the patients would do better than if they were let alone The operation is not a dangerous one itself It is the condition of the bowel which imperils the life of the patient There are two or three points in Dr Meisenbach's case that interested me In regard to the condition of the bowel, I think it was Mr Keyes, one of England's most conservative surgeons, who said that under all circumstances the best place for the bowel is in the belly He did not mean by that that it should apply to the case of a sphacelated bowel, that such a bowel should be pushed into the belly, but that it should be the rule that in cases of doubt, the bowel should be returned to the neck of the sac, it should always be done if there is the slightest doubt about its being dead, that is the proper thing to do, even if it is dead you cannot do any harm by it, for the very reason that if the bowel is dead, nature is there to protect it, she throws a protecting wall around inside by the localized peritonitis which has taken place in the abdominal cavity, and unless the surgeon ruthlessly thrusts his finger up and breaks up the adhesions, the abdominal cavity is thoroughly protected, and if he presses the bowel down to the neck of the sac and leaves it there, even though it is absolutely dead no harm will result The statement of Mr Keyes did not apply to any such procedure, it simply implied that it should be pressed back to the neck of the sac and left there If it was dead an opening of the bowel would take place spontaneously and an artificial anus established by nature's methods In all cases in which there has been acute strangulated hernia, and the bowel is in bad condition, it is never prudent to thrust the bowel into the peritoneal cavity, it should simply be pressed into the opening and left there, and if its vitality is not fatally damaged it will be all right In a case of recent protruding omentum, where strangulation takes place, whether the bowel empties or not it ought to be returned without an operation All hernias ought to be returned without operation unless there is good reason to believe there is serious damage to the contents of the sac, this is the only condition which makes it prudent, advisable or good surgery to open the sac, unless the conditions are such that it will not go back into the sac Then of course it is absolutely necessary to open the sac

In the old cases of hernia, where the omentum has protruded a long time, it invariably thickens up and looks like a mass of fat rather than omentum, its character is entirely changed We may be able to unravel it, as Dr Gregory says, but I believe that whenever, in an old hernia, the omentum has undergone this sort of change, as it will inevitably, sooner or later, if it be protruded, especially if the patient is in the habit of wearing a truss—I believe in all such cases where a strangulation takes place, and when the bowel becomes strangulated, it does not matter whether we can reduce the bowel or not, I believe it is infinitely better for the patient that we cut off the omentum, and I think the patient is in a vastly better condition than if it is left, because if we leave it, the patient will suffer some time or another with strangulated hernia, whereas if we cut off the omentum we furnish the best condition for a permanent cure Destroy the sac if you choose, dissect off the entire sac, and leave the pedicle as a plug in the outlet I believe this is better practice Most certainly it is advisable in every case of strangulated hernia upon which we have to operate, where the bowel cannot be reduced, and it is necessary to open the sac I believe the best practice in those cases is to ligate the mass of omentum and cut it off, not, however, without first searching in the omental sac for a knuckle of intestine, where it is very apt to lie

concealed Some years ago a patient came to me with a large scrotal hernia and desired to have it operated upon I opened the sac and succeeded in getting the bowel back, but there were three pounds of omentum which I cut off, tied it, left a pedicle in the opening, and he got well, not without a bad symptom, though, because he had a good deal of trouble, an inflammation set up in the scrotum, there was a good deal of sloughing, etc I used antiseptics, but probably imperfectly In another case of an old woman that I operated upon, I cut off quite a mass of omentum, and the result in this case was good Dr Lutz, in speaking of the case of omental hernia, said he did not understand what good a concave truss would do, that it could not push the mass back That is true, but the object of the surgeon is not to push it back, but it is to prevent the further protrusion that we use this truss If that woman had worn a concave truss when the hernial mass was one-half the size it finally attained, she would not have had the disagreeable symptoms—the dragging sensation I think Dr Lutz acted wisely in cutting it off I think it would be bad to push it back into the abdominal cavity It is like a foreign body when it is so pushed back It has lost the character of omentum, it would be an irritant, and I believe it is bad practice to push it back when it is possible to do it It is better to tie it and cut it off

DR MEISENBACH said it occurred to him that the correct procedure would be to cut off the omental mass, leaving the stump to plug the abdominal ring, but he could not carry out his original intention on account of the hæmorrhage He does not think, however, that there was any chance for the bowel to get out again If he had not found that the patient died from shock, he would have thought that possibly if the omentum had been cut off and returned, it might have given the patient a better chance

DR T F PREWITT presented a case of

POPLITEAL ANEURISM

This man is 31 years of age now When a boy something like 14 years of age he received an injury in the popliteal space from a file which his brother threw at him There was a little hæmorrhage at the time, there was perhaps a little swelling, but he tells me he was going about after a little while without difficulty, and it gave him no trouble for years In 1878 he had an attack of sunstroke, and some little time after the sunstroke, a month perhaps, while sitting at the table looking out of the window, he felt a peculiar sensation in the popliteal region and a general weakness, and putting his hand down he felt the pulsations of a swelling in the popliteal space He says the leg swelled a great deal and that the pulsation was very marked, more so than it has been since that time He called his mother's attention to the tumor, and she put her ear to it, and could hear the bruit very distinctly, like water rushing through, as she expressed it Then a physician was called in, who recognized that it was an aneurism, and asked the late Dr Hodgen to see it He saw it and was very much interested in it, and advised that he wear an elastic stocking The patient did this, wearing out two pairs I first saw the patient some two or three years ago, when he was suffering from alcoholism, and he called my attention to the aneurism I recognized it as an arterio-venous aneurism I was undecided whether there was a well defined sac or not, it was a very soft swelling, very easily compressible, and it seemed to me more like a dilated sac than like a varicose aneurism An interesting feature about it is that, as I have stated, the injury from which the trouble started occurred twelve or fourteen years previous to the symptoms of aneurism appearing This form of aneurism is almost always the result of injury, not always, because they are sometimes actually congenital, but I think Mr Bryant states that of 57 cases of aneurism of this character perhaps 32 or 33 were traumatic A very large proportion were traumatic, and we generally expect to find them occurring from some traumatic origin Another rather peculiar fact is that when I saw the case it did not strike me that it was likely to give him much trouble, it was not a very large pulsating tumor, and as it is the rule in surgery to let them alone unless there is some good reason for interfering, I paid but little attention to it Subsequently, however, he went out and fell into the hands of another physician, who operated, and as I understand tied the artery above the point of communication I learned from him that this never seemed to stop the pulsations, or never completely did so Whether or not the sac was laid open at the time of the operation I do not know At all events I understand the artery was tied above the communication He came back to me recently with the tumor considerably enlarged Before I knew what had been done I examined the case, and satisfied myself that it had not been tied below, because if we make pressure above it does not stop the pulsation, but if you make pressure below you can control it He tells me that after the operation he was in bed for five months, and that after getting up he had to go about on crutches for two months The tumor is undoubtedly fed by the return current Tying the artery above cuts off the direct current I will tie it below

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MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, April 20, 1887

THE PRESIDENT, JOS TABER JOHNSON, M D, IN THE CHAIR

DR L L FRIEDRICH read a paper entitled

ENDOSCOPY

As is generally conceded the endoscope is an instrument that is very little used by the profession at large, and to some its use and appearance are very vague, and, in fact, unknown The busy practitioner has no time to use it, and hence only a few specialists are in the habit of employing it either as a means of research, or, more properly speaking, as an aid in diagnosis and treatment in obstinate diseases of the urethra and bladder The older and more complicated instruments of Desormeaux,

Cruise, and their various modifications, are no better than a simple straight urethral tube, blackened on the inner surface and furnished with an obturator They may be either metal or hard rubber The latter are to be preferred for caustics These instruments are made of various sizes, from No 18 to No 26, Charière scale

To make a thorough examination the tube, having been well oiled and warmed, is introduced gently into the membranous urethra, the obturator withdrawn, the oil and mucus wiped away from the presenting membrane at the bottom of the tube by means of a little cotton twisted on a long double-ended probe The illumination is then brought to bear directly upon each portion of the membrane inspected as the tube is withdrawn The ordinary laryngoscopic reflector answers every purpose With a little practice it is not difficult to distinguish healthy from diseased tissue But, as with the ophthalmoscope, at first all seems red The healthy mucous membrane has a pale, pink color, and contrasts strongly with congested spots, which are of a vinous red without polish Such spots can be plainly seen as they come across the end of the tube Any granulations are readily recognized by the practiced eye, and local applications of considerable strength made which could not be applied with safety by any other means Great care is to be exercised that the cotton on the end of the probe is firmly attached, and the patient at the same time warned not to move or violently withdraw the tube so as to leave the cotton with the caustic either within the bladder or posterior urethra The topical remedy for granulations suggested by Desormeaux, and which can be very accurately applied, is a solution of nitrate of silver 3ij to the ℥j (8 to 32) up to a saturated solution The latter should only be used in case of large granulations, and then only very lightly Iodine, sulphate of copper, tannin, etc , are also used, and give fair results, especially copper sulphate 33 per cent The great advantages of this method of treatment are, that the spot to which an application has been made may be inspected from time to time and the effect of treatment be critically observed This treatment is to be repeated at first several times a week, then weekly until the cure is established Success is sure to attend the prolonged intelligent use of the endoscope But it is only the most obstinate cases, which have withstood other treatment, that require the prolonged applications

The occurrence of urethral chancre is not very uncommon It is my fortune at present to have under treatment a case, which the endoscope served to detect, that several eminent gentlemen had been treating for gonorrhœa There was no lumpiness around the urethra, no painful spot on erection, no bloody discharge from the urethra, yet upon a careful examination I detected upon the roof of the urethra, about one inch from the meatus, the chancre, a slight oval sore whence the discharge emanated This is undoubtedly a urethral chancre, for gonorrhœa does not produce an ulceration of the urethral mucous membrane No doubt the creamy discharge, with the pain on micturition, led to the mistake in this case, as is likely where only a superficial or hasty diagnosis is made When last seen the patient had the enlarged inguinal glands, and the other symptoms of the constitutional disease, namely, roseola syphilitica, etc

A similar case has been reported of a patient who was treated for gonorrhœa, his symptoms being those of a creamy discharge and pain on urination After awhile constitutional symptoms were developed, and the endoscope introduced long after showed a faint cicatrix at the point of the old ulcer on the upper surface of the canal

Prof von Dittel showed that by means of the endoscope and electric light the interior of the bladder could be thoroughly examined Prof Ultzman uses the endoscopic tube with brush attachment, without aid of reflected light He claims that by this means he can do just as well, and as the other procedure takes too much time for his extensive practice, he prefers it Grunfeld gives a great variety of diagrams and plates for the different portions of the urethra, which he claims are characteristic for each Polipi, epithelial growths, etc , are readily seen Prof Janowisky, of Prague, says that the endoscope is sometimes valuable in prognosis, and as an aid in diagnosis, especially in the strictures of wide calibre, as described by Otis

Dr Yarrow said that he had tried to use the endoscope but had never been successful, probably from lack of skill

Dr Friedrich found difficulty in using it at first, but after seeing it in the hands of the masters he had learned to use it successfully He found that one must work quickly and must wipe away all the mucus and oil before a good view can be obtained, even then the field soon becomes dimmed

Dr D S Lamb reported a case of

DEATH FROM ILLUMINATING GAS

Dr R D DeL French, who was called to the case, writes me as follows Lucy K , mulatto, age about 18, retired between 10 and 11 P M , March 31, 1887, having first blown out the gas which was turned on full Nothing more was heard of her until her employer rapped at her door without receiving any reply after 6 A M , April 1st The room being forcibly entered, she was found asphyxiated, the gas having been escaping into the room from the time when she blew it out Her body was cold and rigid lying partly on the right side with her tongue out and her mouth full of and covered with froth She was almost pulseless and her respirations slow and shallow Pupils completely contracted and her skin and lips pale She had vomited (some remaining in her mouth), and had evacuated the contents of her bowels The window had been opened and the doors and other windows allowing the gas to escape A good stiff breeze was blowing into the room through the open window I had the patient placed in front of the window immediately, her limbs swathed in sinapisms and hot poultices applied to her thorax Ordered 5 grains carb ammon every half hour and whiskey *ad lib* Applied electricity, one electrode to cervix and the other to præcordial region This

DR G WYTHE COOK had a case of a child of 12 whose mother had put it to bed and had unwittingly turned the old fashioned gas key too far, so that though the light was extinguished the gas continued to escape The child was found unconscious and breathing stertorously, he was very pale, and had vomited When seen by him the only symptoms were pallor and headache Recovery

DR G N ACKER related an unpleasant experience from inhaling coal gas from a stove He had retired about 12, and when he regained consciousness he found himself upon the floor attended by a physician and several other people He was told that he had awakened the people of the house by the loud noises which he made about 3 A M He felt stupid for a day after this, and for several days he had a buzzing in his ears and felt very much indisposed He is now very susceptible to coal gas, which causes flushing of his face and an uncomfortable feeling generally

DR C L MAGRUDER mentioned transfusion as another method of treatment Transfusion of blood, milk and saline solutions have been successfully employed in cases of this kind, even several days after the accident

DR LAMB stated that in the references which he had looked up transfusion was not regarded as being of much value

FOREIGN CORRESPONDENCE

ST GALL AND ZURICH[1]

Tuberculosis of Cranium—Prolapse of Uterus—Sonderegger—Ambuhl—Zurich — Kronlein — Swiss Universities—Resection of Chest Wall and Lung—Osteomyelitis of Fractured Bones—Infectious Strumitis—Struma Operations—Carcinomatous Stricture of Colon—Klebs—Rohrer

After visiting Lindau, Bregenz and Rorschach, I arrived in St Gall May 4 This ancient city is the capital of the Canton of the same name, and although it has only a population of 30,000, it has two excellent hospitals, the Kantonspital and the Buergerspital, the latter, however, is only intended for convalescents, incurables, and serves at the same time as a poor house Each of the hospitals contains about 100 beds Dr Hilly, a physician of excellent local reputation, has charge of the medical wards, Dr Feurer of the surgical, and Dr Kuhn of the gynecological Both Dr Feurer and Dr Kuhn are young, energetic men and excellent operators, and besides their onerous duties in the hospital do a large and lucrative private practice I saw a number of interesting operations, and satisfied myself that excellent scientific and practical work is done here The antiseptic treatment is thoroughly carried out and the operating room is supplied with all modern improvements and with an excellent assortment of instruments

I saw here an interesting case of tuberculosis of the cranium in a woman about 30 years of age, where repeated operations had been performed, and over a large area corresponding to the superior longitudinal sinus the entire thickness of the bone had been removed, but the disease returned a short time after every operation, and at present a number of sinuses lead to tubercular depots The disease evidently creeps along the structure of the diploe, and is extending very rapidly By continuity it has also extended to the dura mater, where it has given rise to a tubercular pachymeningitis, as the patient suffers from periodical attacks of headache and vomiting In the children's ward I was shown a child several months of age with a meningocele the size of an adult's head As the case is undoubtedly complicated by an encephalocele, no operative measures have been instituted

Dr Kuhn performed on the same patient and at the same time three distinct operations for an aggravated prolapse of the uterus As the cervix was very much enlarged, a wedge shaped piece was excised from both lips in such a manner that a complete cone was removed and the hæmorrhage arrested by carefully suturing with catgut The cystocele was corrected by excision of an oblong piece of mucous membrane of the anterior vaginal wall, and the parts again sutured with catgut The last operation was the customary colpo-perineorrhaphy During the excision of the flap of mucous membrane the incisions were carried so deep that the rectum was exposed for some distance, and a number of vessels which bled freely had to be ligated Catgut was used even for suturing the perineum The German surgeons almost without exception use the knife instead of scissors in vivifying the parts in all vaginal operations, and it certainly seems to me that the wounds thus made are in a better condition to heal by rapid union than in cases where the tissues are cut with scissors In this case at least a tablespoonful of iodoform was deposited in the vagina with a spatula, and the vaginal outlet was covered with a compress of iodoform gauze As a disinfectant, both in the surgical and gynecological wards, a solution of corrosive sublimate 1–1,000 is used, and sublimated gauze and cotton as a dressing

For years I have been aware of the fact that St Gall was the home of the leader of the medical profession of Switzerland, and I was therefore exceedingly anxious to become personally acquainted with Dr Sonderegger I never met with a more cordial reception, and his good wife insisted on serving a genuine Swiss dinner, and the doctor supplied the table with a brand of wine such as can only grow in the most favored valley in Switzerland, a Velthner almost as old as the doctor himself Dr Sondereg ger is the author of one of the best books on sanitary matters He has a national reputation as an orator, and enjoys the respect and friendship of all who know him With word and action he is always eager to preserve the honor and dignity of the medical profession and to impress his colleagues and the Government with the importance of preventive medicine To his untiring efforts is due the establishment of a small laboratory in the city, where Dr

[1] By permission of Drs Fenger and Senn

Ambuhl, an able chemist, has done excellent service in improving the hygienic condition of the city and surrounding country towns I am convinced that such an institution, with such a man at its head, is a greater benefit to a community than our more expensive local Boards of Health

After spending a few days in my native village in the beautiful valley of the Rhine, I came to Zurich, and remained in this place a whole week The hospital is the same as when I was here nine years ago, but a walk through the surgical wards was enough to show me that a change of directorship had taken place When I was here before I saw the sad results of the open wound treatment as advocated and practised by Rose in every ward and almost in every bed The rooms were filled with unpleasant odors from decomposing wound products, wounds were suppurating, and the patients looked haggard and many marasmic Primary union was not aimed at, and consequently was never observed Since then Kronlein has taken Rose's place, and the whole aspect of things has undergone a radical change The open wound treatment has given way to careful antiseptic measures, and in the same rooms you can hardly find a febrile patient In the great majority of cases wounds heal by primary union, and suppuration is an exceedingly rare occurrence Professor Kronlein is hardly 40 years of age, with a strong constitution and unlimited capacity for work He first came into prominence by his controversy with Volkmann, and it is generally conceded that after a harsh and bitter fight he came out victorious He next became well known as Langenbeck's favorite assistant, and during his term of service he wrote several articles which have since been frequently referred to by most authors and teachers Switzerland is now to be congratulated that the chair of surgery in all universities is now occupied by distinguished Swiss surgeons For centuries it had been customary to import young men from Germany as professors, who remained until they received a call from some German university, when they resigned to make room for another one of their countrymen There was no earthly reason why the Swiss universities should have remained so long as training schools for the German Privat-Docenters, and it is to be hoped that after this, when a vacancy occurs, home talent will at least be given the first chance

The surgical wards in the hospital contain eighty beds, which are always occupied Zurich has 270 medical students of which number forty are females The female students here, as in the other schools in Switzerland, do not sit together in the operating-room, but prefer to mix thoroughly with the sterner sex A look at the female aspirants for the medical degree is enough to show of what metal they are made In the female wards I saw the young lady whose case has been mentioned by almost every medical journal in the world, as Kronlein had removed a part of the chest wall and a portion of the lung for sarcoma She recovered and remained in good health for more than a year, when a return of the disease was observed in the cicatrix A few weeks ago the third operation was performed, when another piece of the lung was removed with a still larger section of the chest wall The wound is now entirely healed, and the patient left the hospital the same day, in excellent health The last operation was followed by an attack of croupous pneumonia

From a pathological standpoint another case attracted my interest A young man sustained several subcutaneous fractures from a fall, and at the same time a lacerated wound of the groin The case progressed favorably until the wound commenced to suppurate, when he was suddenly attacked by osteomyelitis of the fractured bones, which necessitated numerous incisions for the liberation of pus at the seat of fractures There can be no question that in this case the pus microbes entered the circulation at the primary seat of suppuration and were arrested at the seat of fracture, where they found favorable conditions for growth and initiated a suppurative inflammation in the medullary tissue Practically this case should teach us that in a patient who has sustained a simple fracture it is exceedingly important to guard against suppuration in any part of the body, for fear that from such purulent depot germs might enter the circulation and cause a suppurative osteomyelitis of the fractured bone, in the same manner as has been done by experiments on animals

A case of strumitis with a somewhat similar origin also attracted my interest The patient was a man about 40 years of age who had been operated upon for empyema by rib resection some time ago He had a large goitre since childhood The case progressed very favorably until the empyema was nearly well, when suddenly the temperature rose and the right side of the struma became painful and tender After a week fluctuation was well marked and a large incision was made, which gave exit to a large quantity of fetid pus The fever subsided at once and the case again progressed favorably until, a week or two later, the opposite side of the struma was attacked in a similar manner I was present when this side was incised A large amount of the same fetid green pus escaped The strumitis was undoubtedly of embolic origin, the germs which gained access into the circulation from the pleural cavity found in the struma conditions which favored their localization and development, and produced a suppurative inflammation

Of the numerous operations I saw during the week I will only detail two cases of struma operations In both cases the operations were performed to relieve distressing symptoms Chloroform narcosis was only kept up until the tumor was fully exposed, after this it was considered dangerous to continue its administration for fear that it might produce asphyxia

The first case was a boy 20 years of age who had the commencement of a goitre ten years ago The tumor gradually increased in size until recently it has given rise to a great deal of difficulty in breathing Externally the tumor is not prominent, but when the head is thrown backward it can be distinctly seen to dip down behind the sternum He has also experienced some trouble in swallowing, and its presence seems to have kept up a constant irritation in the trachea The incision was made along

the anterior margin of the sterno cleido mastoid muscle, and hæmorrhage arrested as the tissues were divided layer by layer, until the capsule proper of the tumor was reached Downwards the incision was carried as far as the sternum The dissection on each side of the tumor was made with great care and mainly with the points of dissecting forceps and Kocher's struma director The superior and inferior thyroid arteries were isolated and divided between two Kocher's hæmostatic forceps With great difficulty the post sternal portion was lifted from its bed, and here the minutest precautions were exercised to secure every vessel before it was divided The recurrent laryngeal nerve on the left side was exposed and drawn out of the way with blunt hooks

The tumor seemed to spring mainly from left lobe, and a part of the isthmus and entire right lobe could be left intact The tumor was separated from the isthmus by tearing, which caused considerable bleed ing, for the arrest of which a number of ligatures were required I should think at least fifty ligatures were used during the operation, which lasted nearly two hours The wound was frequently irrigated with a 1–1,000 solution of corrosive sublimate A drain was introduced into the most dependent angle of the wound, and the balance of the wound was sutured A large dressing of dry sublimated gauze and cotton was applied

The second operation of this kind was made on a man 40 years of age who had had a goitre as long as he could remember Although of considerable size, it gave rise to no serious trouble until quite recently Lately it has been growing quite rapidly, and at present he suffers from great dyspnœa after the slightest exertion The patient is very anæmic The tumor is quite firm and its lower margin can be felt The operation was the same as in the foregoing case, and that on account of firm adhesions to adjacent parts anteriorly the dissection in this locality was attended by great difficulty, as it was not easy to decide between tumor tissue and adherent parts Near the base, where no such adhesions existed, the separation proceeded rapidly and without any accidents The thyroid arteries were larger than the radial vessels I noticed that wherever it was possible the hæmostatic forceps were always applied across the vessels, which not only afforded better security in controlling the hæmorrhage, but also facilitated the application of the ligatures In both cases the trachea was found considerably compressed and flattened, but no trouble appeared from this source, and the relief afforded by the operation was prompt and lasting in each instance Both specimens on examination proved to be adenomata with cystic degeneration Both patients were reported as doing well a week later

The first day I was in Zurich I was present at a very interesting autopsy made by Professor Klebs upon one of Kronlein's patients A few days before a woman 40 years of age was brought into the hospital presenting well-marked symptoms of intestinal obstruction, which had lasted for two weeks On examination no cause for the obstruction could be found The examination was not satisfactory, as the abdomen was very tympanitic Laparotomy was performed, but as nothing could be found and the small intestines were found enormously distended throughout, inguinal colotomy was performed The operation was followed by decided relief, the abdomen collapsed and a large quantity of fæces was discharged through the artificial anus, but the patient died of collapse the next day At the post mortem examination the cause of the obstruction was found 20 ctm below the artificial anus in the shape of a narrow annular carcinomatous stricture of the colon In his remarks on the case Professor Kronlein stated that he had observed four similar cases during the time he has been in Zurich It is not unusual that such a stricture gives rise to no symptoms until suddenly symptoms of complete intestinal obstruction are developed It would be well in the future, when a similar condition is suspected, to explore if need be the upper portion of rectum and lower extremity of colon as far as accessible by Simon's method, as in case the lesion is recognized and accurately located these cases are favorable for a radical operation by excision

Professor Klebs kindly showed me his laboratory and many very valuable specimens in his collection He has just completed the first volume of his great work on pathology, which is to appear in three volumes Although somewhat advanced in years, he remains at his post from morning until evening ever ready to impart information to the seekers for knowledge If the remaining volumes are to be judged by the first his work will be the most complete and perfect text book on pathology

Dr Rohrer, Privat-Docent for Otology, is an enthusiast in his specialty He works daily from one to two hours with Prof Klebs and has prepared one of the finest collections of the comparative anatomy on the ear in the world He is also pursuing bacteriological studies with special reference to diseases of the ear I spent a profitable afternoon in his private clinic and was astonished with what care and patience he examines his patients Supplied with all modern instruments for investigation he is enabled in all cases to locate the pathological conditions with precision and on the basis of a correct diagnosis in obscure cases, he is prepared to adopt a rational and often successful course of treatment in cases heretofore considered incurable He is one of the most active and influential members of the International Congress of Otology, and if he continues in the future as he has done in the past will soon stand at the head of his specialty

N SENN

DOMESTIC CORRESPONDENCE

TRANSFUSION OF BLOOD

Dear Sir —In THE JOURNAL of April 9, you published a letter from me criticising an article by Prof Hunter, of Edinburgh, on the subject of transfusion In that letter I insisted that Prof Hunter's conclusions were formulated on theories which were in dis-

pute and inconclusive, and that the published results of this operation showed it to be of permanent benefit, when successfully performed

In THE JOURNAL of July 9 and 16 is published a lecture by Prof H von Ziemssen, on "Subcutaneous Blood Injections," which fully sustains my position Prof Ziemssen says "I am convinced that in these cases (pernicious anæmia) the hæmoglobin is not merely temporarily improved, but a cure may be obtained, possibly by the action of the blood in a way unknown to us" In his opinion the therapeutic value of blood is so great as to more than counterbalance the depressing effects of chloroform narcosis, the massage, which is so severe that the administration of chloroform is rendered necessary, the pain attending the introduction of the canula from twelve to fifteen times "through a raised fold of the skin deep into the subcutaneous cellular tissue," the stretching and tearing of the tissue under the powerful massage (see THE JOURNAL, July 9, p 37), the chilling effects of the use of an ice bladder "renewed as long as the pain continues" (from two to six days), and in addition to all this, the "ecchymoses which frequently, but not always, result from the injections"

Nor is the blood, the value of which more than counterbalances all this, of unimpaired value and vitality? It has been exposed to the air, whipped, subjected to a powerful massage, and so changed that it does not take its place among the blood corpuscles of the patient, but only serves to increase the hæmoglobin We need no tables to show this Let any one interested in the subject beat some freshly drawn blood as violently as it must be treated in the defibrinization and massage to which it is subjected in the process of subcutaneous injection, and he will find, if he place it under the microscope, that the corpuscles are either partially or wholly destroyed Now, if blood be so valuable after having been deprived of its fibrin and of the blood plaques (or elementary corpuscles) exposed to the air, chemically changed (for Blundell proved, by his experiments, that blood changes chemically when out of living tissue longer than three seconds), how much more valuable would be a transfusion, in which the blood, unimpaired and unchanged—just as good as new—should be transferred to the patient's veins with no greater pain than is caused by once opening the smallest and most readily accessible vein in the venous system? This, too, without any disturbance to the heart, for the experiments of Worm-Muller have shown that where the blood is unmixed with air, if the transfusion be slow, the heart rapidly accommodates itself to wide changes in the blood pressure "without any pathological phenomena" (Ziemssen's Cyclopædia, article "Transfusion") Roussel ("Transfusion") records fifty four direct transfusions, in not one of which was there any heart disturbance

In my own experiments in the presence of Professors Vaughan and Langley, of the University of Michigan, I transfused 17 ozs of blood *rapidly* from the vein of a strong, healthy sheep into the vein of a small, weak one (which was just recovering from the effects of a broken leg) As soon as the operation was completed the animal was released, and was one of the *fleetest runners* I ever saw (Professor L attempted to catch him, without success)

But it is the almost universally received opinion that direct transfusion cannot be safely performed Immermann (Ziemssen's Cyclopædia, Transfusion) says "No instrument has yet been devised with which the operation can be safely performed" Dr T Gaillard Thomas, of New York, has said "Transfusion is an operation the theoretical importance of which all will admit, but practically it amounts to very little indeed, mainly on account of its difficulties and dangers, nearly all of which arise from the tendency of the blood to coagulate" (*Medical Record*, 1878) In another communication I propose to discuss the proposition suggested by these quotations

That blood introduced into the circulation by artificial means has a wonderful effect on both the living and the dead, is proved already beyond question Its effect upon the living is shown by the reported cases of transfusion, particularly by Roussel Its effect upon the dead was shown by the experiments of Brown Séquard "Brown-Sequard has discovered that all the nerves and contractile tissues in the brain and spinal cord, the motor and sensitive nerves and muscles of animals or organic life, the iris, the skin, etc , may, after having lost their vital powers, and their life, recover these properties again and, in some respects, be again resuscitated when blood, containing a great amount of oxygen, is injected into the arteries of all those parts Still more, he has found that when cadaveric rigidity exists in the limbs of man or animals, oxygenated blood has the power of restoring local life in those parts These experiments were made on many animals and on the arms of two decapitated men, thirteen and fourteen hours after death The more blood corpuscles and oxygen the blood injected contains, the greater the power of regeneration In one case, Brown-Séquard maintained local life in a limb for forty-one hours after it was separated from the body" (American Encyclopædia, p 735)

Now, I do not claim, from the above quotation, that transfusion can raise the dead Indeed, it is a serious question whether it can raise the living, and the results of my investigations lead me to claim far less for the operation than have some medical authorities

The question which I next propose to consider is, Can the operation be safely and easily performed?

E E ALLEN

Chicago, August 9, 1887

COLD ABSCESS AND ERYSIPELAS

Dear Sir —About May 1 I was called to see Mr F , aged 78, feeble and quite fleshy, who had a large abscess over the right scapula It was opened and a large quantity of pus evacuated The skin over it was of a dark purple color, and sloughing seemed imminent, but evacuation and drainage caused it to heal without refilling Prompt recovery took place

His wife nursed him and dressed the abscess, a 10 per cent solution of carbolic acid being used A week after the abscess was opened Mrs F was taken

with facial erysipelas of a severe type, which ran a course of about 14 days Towards the last the disease attacked the right leg just above the ankle, an abscess formed and pus was evacuated, and recovery followed

The origin of the cold abscess of Mr F could not be ascertained, there was no history except of a slowly formed swelling, but the wife's erysipelas could be seemingly traced to infection from the abscess while nursing her husband A microscopic examination of the pus from the two abscesses would have been interesting It seems that septic infection is the only way to account for Mrs F 's erysipelas A D BUNBY, M D

St Ansgar, Iowa, July 15, 1887

NEW INSTRUMENTS.

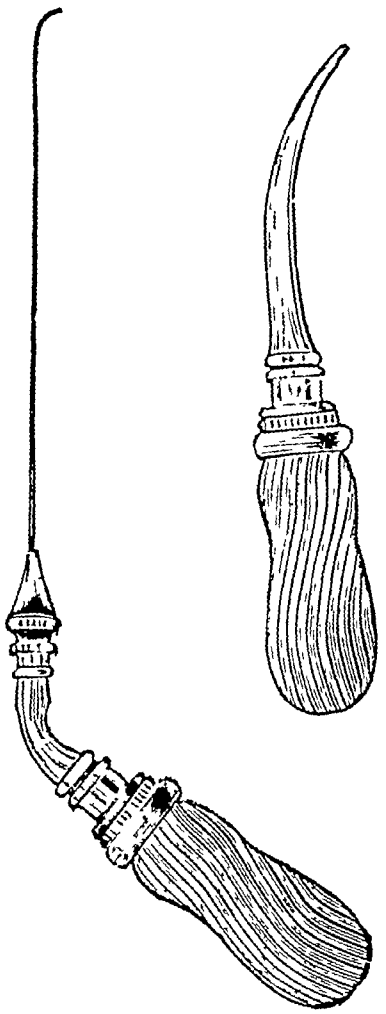
MODIFICATION OF DUNN'S DENTAL SYRINGE

Read before the Chicago Society of Ophthalmology and Otology, February 8, 1887,

BY J ELLIOTT COLBURN, M D,

PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN THE CHICAGO POLI CLINIC ASSISTANT SURGEON TO THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY, ETC

I wish to call your attention to a modification of Dr Dunn's Dental Syringe, which renders it of practical value in the treatment of lachrymal disease It is made with the curve of the Bowman probe, olive-pointed, and conical in shape The instrument can be used with or without the slitting of the canaliculus It can be more delicately manipulated than the piston syringe, and has the merit of being always ready for use In chronic catarrh of the sac, it is eminently convenient, as it enables the operator to use strong astringent solutions without danger of regurgitation into the conjunctival sac In cases of stenosis of the nasal duct it is useful as it can be entered the same as a probe and the operator can force remedies into the nose without wounding the tissues At my suggestion Haussman, McComb & Dunn, of Chicago, have added a convenient tip for medicating the middle ear, being a slight modification of Anel's syringe Altogether it makes the most convenient form of lachrymal and middle ear syringe it is light, strong and durable, capable of great force and delicate manipulation



MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM AUGUST 20 1887, TO AUGUST 26, 1887

Lieut Col Joseph C Baily, Asst Medical Purveyor, granted leave of absence for one month Par 10, S O 191, A G O, August 18, 1887

Major W S Tremaine, Surgeon, found incapacitated for active service by an Army Retiring Board, and extension of leave of absence on account of sickness still further extended until further orders Par 9, S O 192, A G O, August 19, 1887

Major John H Bartholf, Surgeon, leave of absence extended one month Par 7, S O 196, A G O, August 24, 1887

Capt Julius H Patzki, Asst Surgeon, granted leave of absence for one month Par 15, S O 196, A G O, August 23, 1887

Capt Washington Matthews, Asst Surgeon, ordered to proceed to Phoenix, Ariz Ter, on public business, and on completion thereof, to return to his proper station Par 21, S O 195, A G O, August 23, 1887

Capt Blair D Taylor, Asst Surgeon, granted leave of absence for twenty days, to take effect on or about August 31, 1887 Par 7, S O 193, A G O, August 20, 1887

First Lieut E L Swift, Asst Surgeon, ordered to report in person to Commanding General Div Pacific, for duty with troops at Round Valley Indian Reservation Par 20, S O 195, A G O, August 23, 1887

Capt Henry Johnson, Medical Storekeeper, ordered, in addition to his present duties, to take charge of the office and perform the duties of acting Asst Medical Purveyor in New York City during the temporary absence on leave of Lieut Col Jos C Baily, Asst Medical Purveyor Par 11, S O 191, A G O, August 18, 1887

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE WEEKS ENDING AUGUST 27, 1887

Surgeon P H Bailhache, granted leave of absence for thirty days August 26, 1887

P A Surgeon H R Carter, granted leave of absence for twenty seven days August 25, 1887

P A Surgeon H W Yemans, resignation accepted, to take effect September 30, 1887, and leave of absence extended to that date August 24, 1887

Seaton Norman, granted leave of absence for six days, on account of sickness August 27, 1887

THE

Journal of the American Medical Association.

EDITED FOR THE ASSOCIATION BY N S DAVIS

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NINTH INTERNATIONAL MEDICAL CONGRESS.

INAUGURAL ADDRESS

Delivered Monday, September 5, 1887, in Albaugh's Opera House, Washington, D C,

BY NATHAN SMITH DAVIS, M D, L L D,

PRESIDENT OF THE CONGRESS

GENTLEMEN —It is my sad duty first to remind you that *death* has removed from among us *one* to whom, more than to any other, we are indebted for the privilege of having the Ninth International Medical Congress in America *One* whose urbanity, erudition, valuable contributions to medical literature and eminence as a teacher, caused him, not only to be universally regarded the most influential leader in all the preparatory work, but also *the one* unanimously designated to preside over your deliberations on this occasion

That *one* was the late Professor Austin Flint, of New York, who was taken suddenly from his earthly labors early in 1886, before the work of preparation for this Congress had been half completed The true nobility of his private and professional character, his eminent ability as a teacher, and above all the number and value of his contributions to the literature and art of medicine, had caused him to be known and esteemed by the profession in all countries And as you all remember, while the shock of his death was fresh upon us, our loss seemed well nigh irreparable, but though he has taken his departure ripe in years and full of honors, yet the influence of his excellent example and his contributions to medical science remain, and will continue to exert their beneficent influence through all the generations to come

With a full consciousness of my own deficiencies and still with a heart overflowing with gratitude, I thank you for the honor you have bestowed in selecting me to preside over the deliberations of this great and learned assembly It is an honor that I appreciate as second to no other of a temporal nature because it has been bestowed, neither by conquest nor hereditary influence, nor yet by partisan strife, but by the free expression of your own choice

Addressing myself now more directly to those here assembled, who have left homes and loved ones in other lands and encountered the fatigue and danger of travelling by sea and by land, in the name of the Medical Profession of this country I welcome you, not only to this beautiful city and the hospitality of its citizens as has been so admirably done already by the honorable representative of the Government, who has just taken his seat, but I cordially welcome you to the open arms and warm hearts of the medical men of this *whole country*, in whose name you were invited here three years since, and whose representatives are now here, side by side with you, gathered from the East, the West, the North, the South, as well as from the rugged mountains and fertile vallevs of the Centre, to make good the promise implied by that invitation

If they do not cause you to feel at home and happy, not only in the social circles and halls devoted to the advancement of science, literature and art in this city of our Nation's pride, but wherever you may choose to roam, from the rocky coast of New England on the Atlantic to the Golden Gate of the Pacific, it will be from no want of earnest disposition to do so

And now, I not only thus welcome you from other lands, but I take great pleasure in greeting you one and all as leading representatives of a profession whose paramount object is the lessening of human suffering, by preventing, alleviating, or curing diseases wherever found, and in whatever class or grade of the human family Nay, more, with profound reverence I greet you as a noble brotherhood, who in the practical pursuit of that one grand object, recognize no distinction of country, race or creed, but bind up the wounds and assuage the pains of the rich and poor, ruler and ruled, Christian and pagan, friend and foe alike

Not that every medical man does not love and defend his own country and fireside with as fervid a patriotism as the members of any other class of men But as disease and pain are limited to no class or country, so is the application of his beneficent art limited only by the number of those suffering within his reach

With a common object so beneficent in its nature, and opportunities for its practical pursuit so universal, it is but natural that you should be found searching for the most effectual means for the accomplishment of the one object of lessening human suffering, in every field of nature and in every department of human knowledge

The living human body—the chief object of your solicitude, not only combines in itself the greatest

number of elementary substances and the most numerous organs and varied functions, so attuned to harmonious action as to illustrate the operation of every law of physics, every known force in nature, and every step in the development of living matter from the simple aggregation of protoplasm constituting the germinal cell to the full-grown man, but it is placed in appreciable and important relations with the material objects and immaterial forces existing in the world in which he lives

Hence a complete study of the living man, in health and disease, involves a thorough study, not only of his structure and functions but more or less of every element and force entering into the earth, the air and the water with which he stands in constant relation

The Medical Science of to day, therefore, embraces not only a knowledge of the living man, but also of such facts, principles, and materials gathered from every other department of human knowledge as may increase your resources for preventing or alleviating his suffering and of prolonging his life

The time has been, when medical studies embraced little else than the fanciful theories and arbitrary dogmas of a few leading minds, each of which became for the time the founder of a sect or so-called school of medicine, with his disciples more or less numerous But with the development of general and analytical chemistry, of the several departments of Natural Science, of a more practical knowledge of physics, and the adoption of inductive processes of reasoning, the age of theoretical dogmas and of medical sects blindly following some more plausible leader passed away leaving but an *infinitesimal* shadow yet visible on the medical horizon

So true is this, that in casting our mental vision, to-day, over the broad domain of medicine we see its votaries engaged, some searching for new facts and new materials, some studying new applications and better uses of facts and materials already known, some of them are in the dead house with scalpel and microscope, not only studying the position and relations of every part from the obvious bones and muscles to the smallest leucocyte, in health, but also every deviation caused by morbid action or disease Some are searching the fields, the forests, the earth and the air, both for more knowledge concerning the causes of disease and for additional remedial agents, some are in laboratories with crucible, test glass and microscope analyzing every morbid product and every remedial agent, separating the active principles from the crude materials and demonstrating their action on living animals, while far the greater number are at the bed-side of the sick and wounded applying the knowledge gained by all other workers to the relief of human suffering A more active, earnest, ceaseless and beneficent field of labor, is not open to your vision in any other direction or occupied by any other profession or class of men And thus has the Science of Medicine become a vast aggregation of observed facts, many of them so related to each other as to permit practical deductions of permanent value, while many others remain isolated through incompleteness of investigations, and therefore liable to prompt, hasty or even erroneous conclusions

Indeed the most defective and embarrassing feature in the Science and Art of Medicine, at this time, is the rapid accumulation of facts furnished by the vast number of individual workers, each pushing investigations in some special direction without concert with his fellows, and without any adequate conception of the coincident lines of observation necessary to enable him to see the true bearing of the facts he evolves Hence he is constantly mistaking mere coincidences for the relation of cause and effect, and the pages of our medical literature are being filled with hastily formed conclusions and rules of practice from inadequate data

This results in part, at least, from the extent and variety of the fields of inquiry and the complexity of the problems presented for solution For nowhere else within the realms of human thought, does the mind encounter problems requiring for their correct solution the consideration of a greater number of data, than in the study of etiology and pathology To determine the appreciable conditions of the earth, air and water of any country before, during, and after, the invasion of an epidemic disease long enough to include several consecutive visits of the same, is not possible for a single individual, nor for any number of observers acting separately or without concert

Yet just this complete knowledge is necessary to enable us to separate the conditions that are merely coincident or accidental from those that are such constant accompaniments of the disease as to prove a necessary relation between them And it is only by such persistent, coincident systematic observations of many individuals, each having a definite part, and the results carefully compared analytically and synthetically at proper intervals, that the real conditions and laws controlling the prevalence and severity of epidemics and endemics can be clearly demonstrated It is not enough to discover the primary infection, or the *contagium vivum*, whether it be the bacillus of cholera, yellow fever, or tuberculosis, for abundant experience has shown that not one of these will extend its ravages in any community or country unless it finds there is a soil or pabulum congenial for its support and propagation

It is on the development and diffusion of knowledge concerning the local conditions necessary for receiving and propagating the specific infections of disease that nearly all the important sanitary measures of modern times have been based And it is on a further development of knowledge in the same direction, gained by more systematic, continuous and coincident investigation, that we shall most successfully protect our race from the pestilences that have hitherto "walked in darkness and wasted at noonday"

It was the extensive and ever extending field of medical science, the complexity of the problems pressing for solution, and still more the individual responsibility of applying the resources at command to the direct treatment of disease, that early disposed medical men to seek each other's counsel, to form groups or clubs for comparison of views and mutual improvement The manifest advantages of these

soon prompted more extended social gatherings, until at the present time a large proportion of the more active members of the profession in every civilized country are participating in municipal, district, National and International medical organizations

The aggregate benefit derived from all this active intercourse is beyond easy expression in words In the more frequent and familiar comparison of cases and views on all professional subjects in the local societies, closer habits of observation and a wider range of thought are induced while narrow prejudices and bigotry give place to generous rivalry and personal friendships In the larger gatherings, the formal preparation of papers and reports on a great variety of subjects impels their authors to a wider range of study and greater mental discipline, while the collision with other minds in discussion brings all aspects of the subject to view, enlarging the scope of mental vision, starting new trains of thought, and begetting a broader and stronger mental grasp with purer and nobler aims in life

I think I am justified in saying that no other one influence operative in human society during the present century has done as much to develop and diffuse medical knowledge, to stimulate its practical and successful application, both in sanitary measures for preventing disease and in the direct alleviation of suffering at the bedside, and in unifying and ennobling the profession itself, as has been accomplished by the aggregate medical society organizations of the world Yet their capacity for conferring other and perhaps still greater benefits, under proper management, will have become manifest in the near future And that I may accomplish the chief object of this address, I must ask your indulgence while I indicate some of the more important additional benefits in advancing medical science and saving human life through the instrumentality of our medical society organizations, and the methods by which they may be accomplished

Every experienced and intelligent practitioner of the healing art is familiar with the fact that all acute general diseases are influenced in their prevalence and severity by seasons of the year, topographical and other conditions of the earth, meteorological conditions of the atmosphere, and the social condition and habits of the people themselves The most familiar endemics vary annually in the same localities, while the great epidemics that have for ages broken over the comparatively limited boundaries of their habitats only at intervals of years, and extended their ravages from country to country and receded again to the source from which they apparently originated, differ widely in the different periods of their prevalence But in studying the essential causes of any one of these general diseases and the laws and conditions under which such causes operate, he soon finds certain factors, essential for the solution of his problems, wanting

For instance, if he wishes to identify the date of the first attack of epidemic cholera in a given locality, and the character of bowel affections immediately preceding, the ordinary statistics of mortality will give him only the date of death, which may have been from one to seven days later, or it may have been preceded by one or more cases that recovered If he is anxious to determine the reason why the disease, on entering one community, develops with such rapidity that in a few days its victims are found in every grade of the population and in almost every street, while in another it develops slowly, adhering persistently to particular classes or localities, he may find in the ordinary meteorological records the thermometric, barometric and hygrometric conditions of the atmosphere, with the direction and the velocity of the winds, but he finds nothing regarding those important though variable elements known as ozone and hydrogen peroxide, active oxidizers, or those nitrogenous products called free and albuminoid ammonia Neither do the sanitary records give the desired information concerning the composition and impregnations of the soil, or of the organic and inorganic emanations that may arise therefrom

An adequate knowledge of these absent factors relating to the condition of the earth, air and water over districts large enough to embrace localities subject to invasions of the epidemics and others known to be exempt, through a sufficient length of time to cover several periods of prevalence and periods of absence alike, is essential for enabling us to comprehend the causes that make one district amenable to the prevalence of a disease and another not, as well as the marked differences in the severity and mode of progress of the same disease at different periods in the same localities and same classes of the people The same additional knowledge would also furnish the basis for further sanitary measures of the greatest practical value

And yet it must be obvious that the cooperation of numbers of medical men directly engaged in the field of general practice, with others possessed of more practical facilities for chemical and microscopical research, is necessary for successfully prosecuting such coincident and continuous investigations as would be likely to secure the desired results Only well trained general practitioners in every locality chosen for observation could observe and record the date of the initial symptoms of acute general diseases coming under their notice, and at stated intervals collate and report them to a central committee The daily observations concerning the presence and relative proportion of active oxidizers and of nitrogenous organic elements in the atmosphere and the water, would require the selection of one or two experts in chemical and microscopical research for each locality, all making their observations coincidently in time and by uniform methods

There are included in the organized medical associations of each country the men and materials necessary for prosecuting every well defined line of inquiry, and these associations, by their stated meetings and their facilities for inter communication and concert of action, present the entire machinery needed and are only waiting for well planned and systematic use

The tendency to make the permanent medical organizations available for prosecuting work in the directions I have indicated has already been manifested to a limited extent, as may be seen in the for-

mation of the Collective Investigation Committee of the British Medical Association and of the International Collective Investigation Committee, organized during the sitting of the Eighth International Congress at Copenhagen

An earlier movement more fully of the character I have been endeavoring to explain was made by the American Medical Association in 1875[1] when a standing committee was appointed to establish in a sufficient number of localities regular coincident daily observations and records concerning all appreciable meteorological conditions including organic and inorganic elements found in the atmosphere, and the date of beginning of acute general diseases, and report the results at each annual meeting of the Association

The Committee made reports embodying facts of interest and permanent value in 1877[2], in 1879[3], in 1881[4], in 1882[5], and in 1883[6] The latter report contains among other items a complete tabulated statement of the free and albuminoid ammonia in the atmosphere for every day in the year ending Aug 31, 1883, as determined for the committee by Prof J H Long in connection with the laboratory of the Chicago Medical College The Committee is still prosecuting its work with material in hand for a still more important report at an early day The greatest difficulty encountered has been to enlist a sufficient number of active practitioners in each locality who faithfully record the desired clinical facts and report the results to the Committee But this and all other obstacles can be overcome by persevering and well-directed work

I trust no apology is needed for having embraced this occasion to attract your attention to the very important question how to make all our Medical Associations more useful in promoting the science of medicine by more complete methods of investigation, especially in directions where the coincident action of several persons in different places, is essential for success

I fully appreciate the great benefit resulting from the simple mingling of large numbers of medical men in social contact where each is made to hear constantly, whether on the street, in the hotel, or the assembly room, new suggestions, new modes of expression and to observe the physical and mental effects of the various habits and customs of the different peoples, until each one leaves the general gathering with largely increased mental activity and resources as was so happily expressed by Sir James Paget in his address to the Congress of 1881 in London And I appreciate in a still higher degree the benefits derived from the preparation and reading of papers by individuals and the discussion of important questions in all our assemblies

But for reasons I have already briefly stated, I hope to see added in every permanent general medical society, two standing committees, one, to whom should be referred for critical examination every communication claiming to embody a new discovery in either the Science or Art of Medicine, and the other should be charged with the work of devising such lines of investigation for developing additional knowledge as require the cooperation of different individuals, and perhaps societies, and of superintending their efficient execution until crowned with success

If ten or twenty per cent of the money paid for initiation and membership dues by the members of each society were appropriated and judiciously expended in the prosecution of such systematic and continuous investigations from year to year, it would accomplish more in advancing medical science directly, and indirectly in benefitting the human race, than ten times that amount would accomplish if expended in any other direction

For it must be remembered that when money is expended for material objects, even for food, clothing or medicine, such materials feed, clothe or relieve but one set of needy individuals and are themselves consumed, but the expenditure of money and time in such a way as to develop a new fact capable of practical application either in preventing, alleviating or curing disease, that *fact* does not like the food or medicine perish with the using, but it becomes literally imperishable Neither are its benefits limited to one set of individuals, but it is transmitted with the speed of the lightning over the land and under the sea to every civilized people, and whatever benefits it is capable of conferring are as capable of being applied to a million as to one, and of being repeated with increasing efficiency from generation to generation

It has been tersely and correctly stated that associated action constitutes the characteristic and predominating power of the age in which we live

It is by associated action that education in its broadest sense, religion, and civilization have been more rapidly diffused among the masses of mankind during the present century, than during any other period of the world's history

It is by the association of capital, wielded by the associated intellects of the nineteenth century, that highways of commerce have been opened over the valleys, through the mountains, across the deserts, and on the oceans, over some of which the material productions of the nations are borne by the resistless power of steam, and along others the products of mental action are moved with the speed of electric currents, until both time and space are so far nullified that the most distant Nations have become neighbors, and the inhabitants hold daily converse with each other from opposite sides of the globe

Indeed, it is only by means of such of these highways as have been constructed within the memory of him who addresses you, that you have been gathered in this hall from the four quarters of the earth, and through which an account of your doings may be daily transmitted to your most distant homes

I congratulate you on the fact that the profession you represent has taken the lead of all other professions or classes of men, in rendering available these

[1] See Trans American Medical Association, Vol 26, p 125
[2] See Trans American Medical Association, Vol 28, p 153
[3] See Trans American Medical Association, Vol 30, pp 38 147
[4] See Trans American Medical Association, Vol 32, p 481
[5] See Trans American Medical Association, Vol 33, p 43
[6] See Journal of American Medical Association, Vol 2, pp 85 and 169

grand material achievements of the age, for cultivating fraternal relations, developing and interchanging knowledge, and planning concerted action for rendering human life everywhere healthier, happier, and of longer duration

This is the ninth grand International Congress in regular series within little more than two decades, and let us hope that all its work will not only be done in harmony and good order, but with such results as will add much to the aggregate of human happiness through all the coming generations

Without tresspassing further on your patience, I must ask your forbearance with my own imperfect qualifications, and your generous assistance in the discharge of the responsible duties you have devolved upon me

ORIGINAL ARTICLES.

THE SPECIFIC GRAVITY OF THE URINE, AND ITS RELATIONS TO STRUCTURAL DISEASES OF THE KIDNEYS

Read before the Chicago Medical Society, September 5, 1887

BY CHARLES W PURDY, M D,

HONORARY FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS AND SURGEONS KINGSTON

The physical characters of the urine have received the most careful consideration by physicians, even in the remotest periods of medical antiquity They did not escape the keen observation of the great founder of the Coic school, for indeed Hippocrates taught his followers to carefully observe the amount, the color and the clearness of the urine, and the differences in the appearance of the urinary sediment as indications of disease of the urinary organs We are informed that " he even endeavored to demonstrate the influences of various foods and drinks on the constitution of the urine " Whatever may be said of the conclusions drawn from these observations—and considering the dawning faintness of scientific light in that remote period, surely but little of accuracy could be expected—yet the correctness of the observations themselves by the great father of medicine have scarcely since been questioned, indeed many of them have been handed down to us as indisputable and axiomatic truths

To Avicenna, the Arabian, belongs the credit, early in the eleventh century, of first having directed attention to the influence exerted by external circumstances over the physical characters of the urine

Bellini, of Florence in the latter part of the seventeenth century showed by evaporation and subsequent dilution of the urine that the variations in color were due to alterations in the proportions of its contained water and solids It was about this time that the light of chemistry began to illuminate this heretofore darkened field of research, and then began for the first that true and scientific progress which has resulted in our present greatly perfected knowledge of the physiology, chemistry and microscopy of the urine

It is however, greatly to be feared that with our greater knowledge of the chemistry and microscopy of the urine, we are coming more and more to rely upon these too exclusively and thus very often to lose sight of the valuable suggestions afforded by a study of the physical characters of the urine

The object of this paper is to point out the relative value of the knowledge available from observation of the physical characters of the urine in the diagnosis and treatment of diseased conditions of the kidneys, as compared with the chemistry and microscopy of the urine, and I shall for the most part limit what I have to say upon this subject to the consideration of the specific gravity of the urine

The mere presence of albumin in the urine I believe has been vastly overestimated in value as a symptom of renal disease Indeed it only assumes its true importance when taken into consideration with other conditions quite as valuable in significance —if not more so—such as the presence of casts in the urine or the specific gravity of the latter I believe indeed that few people pass through life without at some time, for a longer or shorter period becoming the subjects of albuminuria and yet the proportion who ultimately become the subjects of organic disease of the kidneys is extremely small On the other hand as I have previously shown[1] by statistics of 259 cases of chronic Bright's disease—all of them hospital cases in which the diagnosis was verified at the autopsy—that albumin was present in the urine of 68 of the cases only, leaving 191 cases—about 74 per cent —in which albumin was absent As a positive or negative symptom, therefore, albuminuria is of value only when taken into consideration with other symptoms, and perhaps none of these are more important than the specific gravity of the urine I have no hesitation in stating my belief that the specific gravity of the urine, if carefully and intelligently observed, will afford quite as valuable diagnostic evidence of the presence of renal disease as will albuminuria, while in a prognostic point of view it will in *all cases* prove by far the more trustworthy

Before it is possible to thoroughly comprehend the relations which exist between the specific gravity of the urine and diseased conditions of the kidneys, it shall first be necessary to become familiar with the normal standard of specific gravity of the urine, as well as the variations to which it is subject when the kidneys are free from disease In discussing these points I shall make use of two terms, viz , *the apparent specific gravity of the urine*, and *the real specific gravity of the urine* By the term " apparent specific gravity of the urine" I shall in all cases mean the specific gravity of the urine as it is when passed, without reference to the daily quantity of urine excreted By the term " real specific gravity of the urine" I shall always mean the specific gravity of the whole 24 hours' product, corrected relatively upon the basis of 50 ounces

We shall see that there are numerous conditions and influences compatible with perfect health which vastly change the apparent specific gravity of the

[1] Pre Albuminuric Stage of Bright's Disease Chicago Med Jour and Examiner May 1885

urine and therefore in order to avoid being mislead by such influences we must take the relative specific gravity compared with the normal volume of the 24 hours product, for such alone can give us information of a trustworthy character Moreover, the specific gravity of the urine must always be taken from a part of the *whole 24 hours' product* in order to furnish information of any definite value, because the urine is subject to almost hourly variations in quantity and in specific gravity, and it is only at the end of 24 hours that the cycle of changes becomes completed, and then we may get the sum or product of the whole Furthermore, if we desire to obtain very accurate results, these observations must be extended over weeks

Assuming the condition to be that of adult health the average individual should excrete 50 ounces of urine of specific gravity at 1020 If the specific gravity varies materially from this standard, it will be found to be due to one or more of the following conditions The quantity of urine may be considerably increased or decreased from various causes, and this causes a variation in the apparent, though not in the real specific gravity of the urine The quantity of the urine may become increased from augmented blood presence, as from the use of large quantities of aqueous drinks, the moderate use of alcoholic drinks, which abstract the water from the tissues and overfills the vessels, from cold which contracts the cutaneous vessels and overfills the visceral circulation, from diuretics, more especially those that act upon the heart, as digitalis The quantity of urine may become decreased in health from habitual use of small quantities of fluids, when the skin and lungs are over active as in hot weather, and from diminished general or local blood-pressure The changes in the specific gravity of the urine due to alterations in the quantity are of an inverse degree to the increase or decrease in the volume of urine secreted The change in the specific gravity of the urine, then, is merely the result of the alteration in the proportions of the solid and aqueous elements of the urine, and therefore it is apparent and not real, as gauged by the normal product of 50 ounces

If we take 10 ounces of urine of a normal specific gravity (1020) and evaporate it down to 5 ounces it will then be found that the specific gravity will be doubled (1040) If now 5 ounces of distilled water be added the normal specific gravity, 1020, will be restored Again, if 10 ounces of distilled water be added to the 10 ounces of urine, the specific gravity of which is 1020, the 20 ounces product will give a specific gravity of 1010 Thus we may go on diluting or concentrating at will, and the specific gravity will constantly maintain an exact inverse ratio to the aqueous increase or decrease The solids of the urine are unchanged, as may be proved by entire evaporation of the aqueous urine, the solid residue being subsequently dissolved in the original volume of water lost by evaporation will give the original specific gravity, 1020

Now precisely the same relations obtain in the secretion of urine by healthy kidneys under the varying conditions just named The quantity of solids remains practically unchanged, while the quantity of fluid (water) is subject to the variations brought about by increased or decreased blood-pressure Since these alterations in blood-pressure are usually transient, and always variable, so these variations in the specific gravity of the urine are never permanent, but oscillate above and below the normal standard In diseased conditions of the kidneys, however, the changes both in the quantity and the specific gravity of the urine are permanent, and, moreover, as a rule to which there are very few exceptions, the relations of these alterations is not inverse but direct

We have next to consider the conditions which give rise to variations of the specific gravity of the urine secreted by healthy kidneys which are not dependent upon alterations in the quantity of the urine

Food—The character and quality of food directly influences the amount of solids of the urine, and thus cause variations in the specific gravity of the latter The meals augment the solids and increase the specific gravity of the urine, and hence, *ceteris paribus*, the specific gravity of the urine is higher after food than at other times of the day The habitual overindulgence of the appetite tends to induce a permanent increase in the specific gravity of the urine Foods rich in nitrogen, such as lean meats, furnish a relatively large amount of waste which it is the function of the kidneys to eliminate, and therefore overindulgence in such foods favors a rise in the specific gravity of the urine On the other hand, spare eaters, more especially of meats, usually secrete a urine of somewhat lowered specific gravity

Exercise hastens tissue changes, and furnishes an increased amount of solid urinary excreta We may therefore expect increased specific gravity of the urine in those undergoing active muscular exercise, and the contrary during periods of muscular quietude

The specific gravity of the urine furnishes us data from which we can calculate the amount of solids discharged by the kidneys Several rules have been laid down for this (*a*) If the last two figures of the specific gravity of the urine be multiplied by 2—the coefficient of Trapp—or by 2 33, the coefficient of Haeser—the product will approximately represent the number of grains of solid urine in each 1000 c c (38 fl ℥) (*b*) A still more simple rule mentioned by Oliver[2] is to multiply the last two figures of the specific gravity by the number of ounces of urine, and the product will approximately represent in grains the solid urine discharged in 24 hours

The amount of solids excreted by the kidneys furnishes us with a true gauge of the functional capacity or adequacy of the kidneys, which in health varies but slightly from the normal standard, save under the conditions already considered In disease of the kidneys, however, we have a most marked variation in the solid urine, and consequently in the specific gravity of the latter

This brings us to the consideration of the more practical part of our subject, viz, the influence of diseased conditions of the kidneys on the specific gravity of the urine For general guidance I would lay down the following general rules

[2] Bedside Urine Testing, 3d edition London

1 That all structural diseases of the kidneys cause a decrease in the quantity of solids excreted with the urine

2 That if measured by the normal quantity of the urine (50 ounces) the specific gravity of the urine is decreased by all structural diseases of the kidneys

3 That the decrease, both of the solids and specific gravity of the urine, bears a direct relationship to the extent of each and every lesion of the kidneys

Bearing in mind the foregoing rules we shall be able to comprehend now the value of the information devisable from the specific gravity of the urine It often gives us more trustworthy information than does the presence, or the quantity, of albumin in the urine as to the existence or otherwise of a given renal lesion, and always so of its extent, its weekly progress, its probable chronicity, or otherwise, and finally its progress towards death or recovery

The relations between the specific gravity of the urine and each of the more common organic diseases of the kidneys will now be briefly considered individually

Acute Diffused Nephritis in all its forms—scarlatinal, puerperal, toxic, including exanthemic, metastic, as that arising from cold applied to the skin, burns, and extensive cutaneous lesions, all these are accompanied by the excretion of urine much reduced in solids The apparent specific gravity in these cases is high, because the reduction in the fluid urine is much greater than in the solids The apparent specific gravity of the urine in these cases may reach as high as 1035 to 1040 The average daily quantity of the urine in acute stages of diffuse nephritis is 300 to 400 c c Now, if we take a sample of urine in a case of acute diffuse nephritis reaching the highest specific gravity, 1040, and if we restore the deficiency of the water—which we have just indicated to be on an average three-fourths—we will get a fluid of the specific gravity of 1010, which represents the highest *real* specific gravity of the urine in these cases The high specific gravity of the urine in these cases is therefore only apparently so, and is merely the result of concentration of the urine If ordinary urine of normal specific gravity be evaporated down to the same volume (three fourths), the specific gravity of the urine reduced by evaporation would be much higher than is ever observed in acute diffuse nephritis The doctrine commonly taught that the specific gravity of the urine is actually increased in these conditions is likely to mislead the student, because such a statement carries with it the presumption that the solids excreted by the kidneys are also increased, whereas, as a matter of fact, they are greatly decreased, and this decrease is one of the chief sources of danger to life from uræmia The urine then in cases of acute diffuse nephritis while apparently of higher specific gravity than normal, is yet actually, as measured by the normal volume of urine, much below the normal standard, and if the deficiency in the fluid urine be made up, the specific gravity will in every instance be found to be both apparently and actually below the normal

If improvement occur in these cases the apparent specific gravity of the urine becomes decreased, but the actual specific gravity, as gauged by the normal volume of urine, becomes increased This is due to the fact that with improvement in the renal inflammation comes an increase in the quantity of the fluid urine, which lowers the apparent specific gravity of the urine But improvement in the renal inflammation also permits an increased excretion of solids by the kidneys, and consequently a rise in the real specific gravity as measured by the normal volume of urine If improvement continue the disproportion between the apparent and real specific gravity of the urine diminishes, and when they no longer vary, but coincide, the healthy state of the kidneys is restored

If we restore the aqueous deficiency of the urine in these cases, and observe the actual specific gravity of the urine from day to day, it will furnish us with evidence of the most positive nature as to the extent and intensity of the renal inflammation, as well as of the progress of the disease towards recovery or otherwise, and surely such information is in every way worthy of the trifling pains necessary for its acquirement

Chronic Diffuse Nephritis is accompanied by a decrease in the specific gravity of the urine, and this decrease is both apparent and real The normal volume of the urine is little if any reduced, indeed, in the late stages it is considerably increased If the case be an outgrowth from acute nephritis the reduction of the specific gravity is marked from an early period, because the acute disease has left the kidneys extensively damaged, almost from the beginning Taking, for example, one such case from my notes, I find recorded in May and June, 1884, five months after the acute attack, that the specific gravity of the urine averaged 1012–1014 The case has been under my constant observation and treatment since, and during the last two months, June and July, 1887, the specific gravity of the urine has averaged 1010 It will be noted that the reduction in the specific gravity of the urine has only been two or three degrees in three years, too trifling, it may be thought by some, to afford any practical information On the contrary, it teaches me the most substantial and important information of the progress of my case It indicates to me that, by means of diet and medication, I have retarded the advance of extensively involved kidneys for three years, and moreover postponed renal contraction, as is doubly attested by the absence of cardiac changes and by the fact that the average volume of the urine remains but little if any above normal

In those cases of chronic nephritis, on the other hand, which begin insidiously and independent of acute attacks, the specific gravity of the urine at first is but little below the normal, either apparently or actually Gauged by the normal volume of urine, it is usually not lower than 1017 to 1019

If the specific gravity of the urine be noted from time to time in these cases, it will furnish pretty substantial information as to the progress and extent of the disease From month to month, or at least from year to year, if the progress of the disease continues

unchecked, the specific gravity of the urine will become more and more reduced Finally, in the last stages of the disease, from whatever cause it arises, the specific gravity of the urine becomes very much reduced Contraction of the kidney begins, and with this cardio-vascular changes usually occur and result in increasing the volume of urine above normal It is not uncommon for the specific gravity of the urine under such circumstances to range as low as 1006 to 1008 I am, indeed, led to believe that contracted kidneys resulting from chronic diffused nephritis furnish urine of considerably lower specific gravity than do the granular contracted kidneys, or the so-called kidneys of interstitial nephritis In the former case the lesions are more diffuse, and involve more of the secretory structure of the organs, while in granular contracted kidneys the changes begin in circumscribed areas of the organs, and rarely become general

Cirrhosis of the Kidneys, or primary granular atrophy, results in excretion of urine both apparently and really below normal in specific gravity The decrease is not marked at first, indeed, it is stated in some cases to be slightly above normal I believe that in such cases the patients are large meat consumers, for upon ordinary diet I have always found the urine at least from one to three or four points below normal in the early stages of the disease As is well known, this disease is very tardy in its progress under ordinary circumstances, and therefore it may be several years before the specific gravity falls very markedly In the middle stages of the disease, with commencing cardiac changes, I have observed the usual range to be 1014–1016 In the late stages of the disease the specific gravity of the urine usually descends to 1010 or thereabout, and I believe the patient rarely survives long if the specific gravity of the urine continues below that point

The lowered specific gravity of the urine in these cases is a diagnostic point of great importance, and it has more than once saved me from error in diagnosticating Indeed, while preparing this paper, a lady from the interior of the State consulted me as to the condition of her kidneys The urine was absolutely free from albumin, as proved by repeated trials with the most delicate tests No casts were found by usual methods of examination The specific gravity of the urine was constantly below normal, ranging from 1013 to 1015, and this fact more than any other made me suspicious, and more thorough investigation was determined upon A large quantity of urine was secured and charged with resorcin to prevent change, and this was set aside in a conical glass *for three days* in order to insure the settling to the bottom of any casts that might be present In the sediment from this there was no difficulty in finding hyaline and finely granular casts in every slide examined The sphygmograph showed very marked tension in the arterial system, the patient rises at night to urinate pretty regularly, and there has been a dyspepsia and diarrhœa of late which I have no doubt are mild uræmic symptoms Now, without the continued low specific gravity of the urine observed over a number of days under varying conditions, I should hesitate to pronounce the case one of renal cirrhosis, but such it undoubtedly is

It is doubly important that the specific gravity of the whole 24 hours' product of urine be taken in the disease under consideration, because it will usually be found that the specific gravity of the urine in these cases is higher during the day than at night This depends in part at least upon the fact that in most of these cases much the larger part of the urine is secreted at *night*, a circumstance I am unable to account for satisfactorily, unless it be, as the late Dr McBride, of New York, assured me from his personal observation, that the vascular tension is higher at night than in the daytime

Amyloid Degeneration of the Kidneys causes the excretion of urine both apparently and actually below normal in specific gravity As a rule the quantity of urine is somewhat increased, and in some cases it is considerably so This, however, varies in different cases, but in all, if the specific gravity be gauged by the normal quantity of urine, it will be found more or less below the normal standard

The specific gravity of the urine in amyloid disease of the kidneys furnishes very important information as to the extent and progress of the disease, and moreover, it affords valuable prognostic data Perhaps I cannot better illustrate this point than by citing two cases from my notebook The cases were very similar in all respects, save that one of them was much farther advanced than the other They each came under my observation about the same time—case 136 on April 13, 1886, and case 142 on May 7, 1886 They were each the result of syphilis Case 136 was farther advanced, and over two years before coming under my charge was treated for a greatly enlarged liver and spleen (undoubtedly amyloid) The specific gravity of the urine when he came under my observation was 1012, and the quantity of albumin in the urine was 30 per cent volumetric measure In the other case, 142, the specific gravity was 1019 The quantity of albumin in the urine was 40 per cent volumetric measure, and there was slight dropsy of the legs below the knees Now it is important to note that, if we were to be guided by the albuminuria, we should conclude that in case 142 the disease was the more extensive and serious, but the specific gravity of the urine pointed to a more recent and less extensive invasion of the kidneys in case 142 than in case 136, and so the subsequent history proved

The cases were the more similar in the facts that in each the patients could not take large doses of iodides, and they were therefore treated precisely alike, for the most part by small doses of potassium iodide combined with ammonium muriate Now while each of these cases has steadily improved, and probably will ultimately recover, case 142 has made the more rapid improvement, and is, indeed, now on the verge of recovery, while case 136 is not so far improved as to make it altogether certain of the ultimate result My last notes of case 136 show a specific gravity of urine ranging from 1014 to 1016, while the quantity of albumin ranges from 10 to 16

per cent volumetric measure My last notes of case 142, taken about the same time, show the specific gravity of the urine to range from 1019 to 1020, and a range of albumin of from 4 to 6 per cent volumetric measure It seems to me from a comparison of these two cases, that nothing could be more conclusive as to the value of the knowledge elicited by observation of the specific gravity of the urine in such cases It here corrected the false impression likely to arise from superficial examination, namely, that in case 142, with a higher grade of albuminuria, and the presence of dropsy (which was absent in 136), the case was the more serious, and it pointed out unerringly that it was the less extensive, less advanced, and more amenable to treatment

In the late stages of amyloid degeneration of the kidneys, the specific gravity of the urine ranges very low, perhaps lower than in any other renal lesion Usually it is below 1010, and I have in one case observed it as low as 1004 The quantity of urine is more or less augmented in this stage of the disease, so that the real specific gravity of the urine is somewhat higher than the apparent specific gravity

Cyanotic Induration, or venous congestion of the kidneys, causes the secretion of urine of apparent specific gravity higher than normal—1025 to 1035 The volume of urine excreted in 24 hours, however, is considerably below the normal If the specific gravity be gauged by the volume of urine secreted, the former will be found to fall slightly below normal

The anatomical changes in the kidney in this condition are never very marked—never sufficiently so to cause death—and therefore the reduction in the specific gravity of the urine is never so marked as in most other organic diseases of the kidneys

Suppuration of the kidneys, from whatever cause, tubercular, septic, or mestatic, causes the secretion of urine of low specific gravity both apparent and real For the most part this reduction is marked almost from the beginning, ranging as low as 1012 to 1010 A knowledge of this fact throws valuable diagnostic light upon the probable extension or otherwise of pyelitis Thus, in a given case of pyelitis if the specific gravity of the urine remain about normal the case is probably uncomplicated so far as the kidneys are concerned On the other hand, if the specific gravity of the urine be decidedly reduced say to 1010 it indicates that the kidneys share in the suppurative process The quantity of pus in the urine affords no trustworthy information of a diagnostic character in these cases, for it may be comparatively small in quantity when the kidney is involved, or it may be large in quantity when the suppuration is confined to the renal pelvis Moreover, with regard to renal casts, we cannot always rely on their absence as furnishing trustworthy evidence that the kidneys are uninvolved, because the urine is often alkaline in pyelitis, and casts are rarely if ever found in alkaline urine, the reasons of which I have some time since pointed out [3] It will therefore be perceived that the specific gravity of the urine renders most valuable information in these cases

It would be exceedingly interesting and profitable to pursue this subject beyond the limits prescribed by the heading of this paper, to inquire into the variations of the solid urine, and consequently of the specific gravity of the latter in the various morbid conditions of the system generally, such as anæmia cachexia, syphilis, and fevers, as well as outside local diseases, as those of the liver, stomach, lungs, and inflammations Each of these, as is well known, causes a decided variation in the solids and specific gravity of the urine, and indeed these must be taken into consideration when present if the condition of the kidneys is in question But such inquiries would lead us into that vast complex of chemico regressive changes in the system at large, including the physiology of metabolism, a subject altogether too extensive for the necessary limits of this paper, and moreover quite beyond its scope Before closing, however, it may not be improper to briefly consider the subject of so called *functional albuminuria* and its relations to the specific gravity of the urine.

If the doctrine which I have sought to elucidate in this paper be correct, namely, that only those conditions of the kidneys attended by actual anatomical change result in reducing the specific gravity of the urine, then it would naturally enough be expected that in functional albuminuria, in which the kidneys are not essentially damaged, the specific gravity of the urine should not become reduced below the normal standard So true, indeed, have I found this sequence of events in practice that I have adopted it as an axiom I have therefore come to regard the following as a safe rule for guidance, viz that if the actual specific gravity of the urine be not reduced in a given case of albuminuria, the case is one of functional albuminuria

Perhaps I can not better illustrate the strength of my confidence in the diagnostic value of this rule than by the statement that in doubtful cases, if the specific gravity of the urine remain constantly at or above normal over any extended length of time, I should not hesitate to diagnosticate the absence of renal disease, even were albumin constantly present in the urine It might indeed be true that the constant presence of albumin in the urine, betokend changes in the circulation of the kidneys which ultimately might result in permanent organic change in those organs But whether such be the true condition, or that the kidneys be already organically damaged, the mere presence of albumin in the urine would not reliably indicate It is here precisely that the value of the specific gravity of the urine as a diagnostic indication appears, for when not below the normal standard it indicates that the organs are excreting the normal amount of solids, which diseased kidneys are incapable of doing for any continuous length of time

The specific gravity of the urine then in functional albuminuria is never below the normal standard, moreover, according to my observations in many of these cases it marks considerable rise above it, reaching 1022 to 1030 This latter fact has raised

[3] Bright's Disease and Allied Affections of the Kidney pp 104 and 219

many interesting questions in my mind, which I can at present only mention, notwithstanding their probable deep importance

1 What is the interpretation of this apparent increased functional activity of the kidneys in functional albuminuria?

2 Does the cause lie in the kidney itself, or is it the expression of some change of function in a remote organ, or is it the result of changes in the normal metabolism of the blood?

3 What are the relations of this increased specific gravity of the urine to functional albuminuria?

We may perhaps assume that the cause of the increased specific gravity of the urine, and perhaps of the albuminuria itself, are external to the kidneys, since, as has been shown, disease of those organs invariably results in reducing the specific gravity of the urine May not regressive changes in the economy furnish not only an excess of solids to be eliminated by the kidneys, but also in the splitting up of organic compounds result in the formation of a proteid so altered as to permit its escape through the renal filter, while yet not sufficiently altered to change its properties of responding to our ordinary tests for albumin?

There are a number of circumstances favoring such a view Our lack of knowledge of the chemistry of proteids or albumins, together with the well-known facts that they are capable of very great changes in the line just suggested, favor this view It is well known, for instance, that when albumin has taken certain regressive steps in organic metamorphosis, it is at once eliminated by the kidneys, as is observed in peptonuria and propeptonuria Now, may not less marked changes in proteids—say an intermediate step between albumin and peptone—result in the formation of a proteid which answers to all the properties suggested? It seems to me that such is quite possible, if indeed not probable

In a very valuable article on "Functional Albuminuria and its Relation to Hæmoglobinuria" Dr Ralfe,[1] of London, has made some suggestions on the close relationship between accelerated metabolism of the blood—"increased hæmolyses"— and functional albuminuria

As is now known, the red corpuscles of the blood are broken down in the liver The hæmoglobin is converted into pigment and urea in health The albuminous element of the blood corpuscles is converted in the liver into urea ordinarily, but if the destruction be abnormally great Dr Ralfe believes that "a large portion of the albumin passes off by the kidneys" Increased hæmolysis would undoubtedly account for the rise in the specific gravity of the urine in these cases, for with increased hæmolysis we have increase of urea, and the latter constitutes about one-half of the solid urine

Now to the various laws formulated in this paper I am aware of but one exception, and that occurs in cases of chronic Bright's disease combined with diabetes mellitus The occurrence of such a combination is, I believe, much more common than is generally supposed It is true that we are accustomed to find in chronic diabetes small quantities of albumin in the urine, and this is usually attributed to the irritation in the kidneys induced by the excretion of sugar The number of cases of diabetes, however, which have come under my observation accompanied by slight albuminuria and which have subsequently proved to be conjoined with chronic Bright's disease have induced me to adopt the following rule In every case of diabetes accompanied by slight albuminuria, if the patient's age be over forty years, search carefully for evidences of contracting kidney The investigation will present points of unusual difficulty, since the increased volume of urine greatly lessens the chances of discovering renal casts—which are indeed always sparse and difficult to find in this disease The vascular tension is markedly increased in diabetics, which takes away another differential diagnostic prop in such cases, and lastly, as already indicated, the specific gravity of the urine is much above normal It will therefore be observed that the investigation must be most thorough in these cases

The normal urinary solids, as we have seen, are always reduced in chronic Bright's disease, and therefore ordinarily the specific gravity of the urine falls below normal The excretion of sugar, however, often to the extent of 25 to 40 grains in each ounce of urine in diabetics, more than counterbalances the deficiency in solids induced by interstitial nephritis, and therefore the specific gravity of the urine must necessarily rise considerable above the normal standard when the two diseases occur in conjunction It will not answer, therefore, always to attribute the slight albuminuria in diabetes to simple renal irritation, or consequences the most grave and disastrous, which might otherwise be averted, will sometimes overtake these cases

163 State street

[1] British Med Jour Nov 27, 1886

SUDDEN DEATH IN LABOR AND CHILDBED

Read before the Section on Obstetrics and Gynecology, at the Thirty eighth Annual Meeting of the American Medical Association, June, 1887

BY FAYETTE DUNLAP, M D,

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On January 14, 1887, I was summoned to attend a lady, aged 24 years, in her first confinement I had been engaged some months before, and by reference to my visiting book I find that she was expected to be confined on January 27 The note summoning me stated that there had been a slight hæmorrhage from the vagina for several hours, and that a premature delivery was imminent An examination proved that labor had begun, and the os was dilated to an extent to admit the index finger There were no distinct contractions, but the os was slowly dilating, and very satisfactorily The hæmorrhage continued constantly but scantily I ordered a warm vaginal douche, left the house and returned after four hours There had been some progress made, the parts were splendidly lubricated, the pains coming on periodically and increasing in force—in a few words, the labor was progressing naturally

I retired in an adjoining room at 10 P M with instructions to be called at 2 A M At this hour my patient was sleepless, suffering acutely, and the expulsive efforts very feeble, whereupon I gave hypodermatically ⅙ gr morphia and $\frac{1}{150}$ gr atropia She slept quietly for a short time, and by 7 A M the contractions began in earnest From the beginning of labor the suffering was acute, yet the woman showed no evidence of exhaustion and was very hopeful of a satisfactory issue out of her confinement I gave 30 gr of chloral *per rectum*, as the rim of the os was very sharp and unyielding and the parts becoming dry I could not perceive that it had the least effect locally or constitutionally, and repeated the hot water douche at 11 A M

At 1 P M the delivery was completed and the woman seemingly in unusually good condition, considering the number of hours she had been the victim of acute suffering At no time was there the slightest despondency or evidence that her nervous system was influenced by it The perineum relaxed well, and there was no more than the customary amount of laceration for first labors The placenta was expelled without traction or great amount of compression, and it is absolutely certain that there was no bleeding of consequence I gave my patient my undivided attention for twenty minutes or more, and save a pulse-beat of about 100 and very great prostration there were no unfavorable symptoms She had not moved from her position and was breathing tranquilly

I was preparing to leave the room when she asked me to return, as she felt as if about to faint I instantly thrust my hand into the vagina, expecting hæmorrhage, but found the womb firmly contracted and plainly to be outlined above the pubes Dyspnœa, nausea and a turbulent tossing about in bed began The second sound of the heart was lost, and the organ in a flutter and not to be counted I grasped the shoulders and lowered the head almost to the floor, and in a few seconds consciousness returned, and with it an improved tone of the heart-beat I replaced her quietly in bed, and gave 1 ounce of brandy and had the body warmed At this juncture I despatched a messenger for a consultant, and in a few minutes Dr McMurtry arrived As the heart's action was feeble and the countenance livid, I gave every few minutes brandy hypodermatically for an hour

The tone of the heart's beat would improve and remain strong a few moments at a time, and would then gradually fade away and syncope would again follow The dyspnœa continued, the cyanosis was alarming, and the surface was shrunken and freely perspiring Precisely four hours after the first syncopic seizure the woman suddenly lifted herself in bed, uttered a faint scream and fell back dead Her mind was clear up to the moment of death

In prefacing my remarks upon this case it may be well to state that is my custom to make an analysis of the urine of my pregnant patients, usually about one month before confinement As there was considerable œdema of the ankles, I examined the urine three times microscopically and chemically She was a strong, robust, hopeful person, and had a remarkably fine family history

This sad tragedy, the first one that I had witnessed, made a deep impression upon me, and I repaired at once to all the obstetric literature at my command for some explanation of this unexpected occurrence. The very meagre amount to be found in even the most popular and practical works was a matter of surprise Leishman gives about one fourth of a page, and simply says that very rarely a patient suddenly dies in childbed from some unknown cause, such as shock, heart failure or exhaustion Playfair gives something more, Cazeaux and Ramsbotham and Parvin nothing at all It remains for Lusk, who had an experience similar to my own just prior to giving his work to the press, to give especial attention to this subject A few weeks ago I reported this case to the Medical Society of my village, and nearly every practitioner had had one or more lying in women suddenly die with the assemblage of symptoms above related A calamity of this kind, if taking place only once on an average in the professional life of every general practitioner, deserves more attention than has been given to it

This, and a like experience to be related hereafter, brought the matter prominently forward in my studies In prefacing his remarks upon the class of cases to which this history belongs Winckel says "He who has once seen a puerperal woman happy and joyous in the expectation of soon leaving her couch, then directly afterwards has found her a corpse, will be able to comprehend the truth of Hervieux's words 'In the twinkling of an eye all the calculations of prudence are set at naught, the most untiring vigilance, the best established rules of hygiene, all the varied resources and ingenious combinations of therapeutics, are shattered against an invisible rock,'" then adds with a tone of despondency "The only thing which remains for the physician after such a depressing occurrence is to seek out the cause of the sudden death"

In this search it is my purpose to pass over consideration of rupture of the uterus, apoplexy, the snapping asunder of an aneurism and post-partum hæmorrhage, and following the example of Lusk, confine myself to entrance of air into the lungs, shock, exhaustion and embolism

The surgeons have taught us that the entrance of air into the venous circulation is fraught with danger This accident is most likely to occur in opening the veins of the neck, the act of inspiration encouraging the entrance of a volume of air into the open venous mouths The sudden emptying of the womb produces a like result, and it is plainly to be understood how air can find its way into the open veins of the placental site This is particularly true in cases in which the labor has been unduly prolonged and the uterus left in a relaxed condition It has frequently happened that sudden death has occurred before delivery was accomplished, this being due to the fact that a partial separation of the placenta has left the venous sinuses standing widely open The plan of inducing premature delivery recommended by Kiwisch, then, is particularly perilous

I can recall the particular features of a case in my practice which seems to illustrate the dangers from this source I placed my patient in the Sims' position, introduced his speculum in order to remove a four months' fœtus that was firmly held by the rim of the os uteri I grasped the mass with the placental forceps and easily dislodged it After removing the secundines with the forceps I introduced the nozzle of a Davidson's syringe and forced in a stream of water to clear the womb of clots and débris generally Pure, very warm water only was used The os seemed sufficiently relaxed to allow an unobstructed return of the water thrown in While this was in progress the woman began to breathe heavily, spoke in a whisper, and became cyanotic She felt as if a heavy weight was bearing her down The effort to breathe was violent, and she breathed more rapidly than I thought it possible for an adult to do The heart was beating tumultuously, but strong enough I used brandy freely hypodermatically, and even ventured upon giving 20 drops of liq ammon in one syringeful After lying a few minutes in a relaxed and semi-unconscious state she slowly revived and made a prompt recovery Sir James Paget tells us that it is possible for a considerable amount of air to enter the circulation, and if it is properly disposed through the lungs it will be speedily absorbed and do no damage I have always believed that the sudden and firm contraction of the uterus caught above the internal os a volume of air that had been forced in by the syringe, and it found its readiest exit by way of the venous sinuses My father, who was holding the speculum, remarked that the symptoms presented an exact counterpart to those in a man dying on the operating table from the entrance of air while undergoing an operation for exsection of a portion of rib

Lusk quotes an interesting case reported by Kezmansky, of Budapest The patient was 36 years of age, and in labor for the fourth time An excessive amount of fluid was recognized The patient entered the hospital at 10 A M At 3 P M she lay upon her left side, and the bag of waters protruding from the vulva Spontaneous rupture occurred and a gallon of water escaped Five minutes later the patient suddenly threw back her head, gasped a few times for air, the face became livid, and respiration was arrested In scarcely two minutes Dr Liebman was at her side, but the pulse was extinct The forceps were applied and an asphyxiated child was delivered The heart was feebly beating, and the woman died before delivery was completed At the post-mortem examination, twenty hours after, pale reddish-brown blood, mingled with bubbles of air, was found in the uterine veins, vena cava, lungs, and especially in the pulmonary artery In the vena cava, columns of blood and air alternated Kesmansky makes the following statement in his report "The patient lay upon her left side with her knees drawn up in nearly the Sims' position, with the vulva elevated above the concavity of the abdomen As the membranes ruptured there was a sudden diminution of the intra-abdominal pressure, so that the air entered through the open vulva between the collapsed membranes and the uterus The ensuing retraction of the uterus forced the head to the os externum, and caused the placental separation The next contraction caused the uterine air to escape by the only channel that was possible, viz by the open mouths of the placental veins "

In the *St George's Hospital Reports*, vol vi, Cordment reports two cases From the position of the patients at the time of delivery it was an easy matter for air to gain admission Post-mortem examination demonstrated that the larger veins in both the abdominal and thoracic viscera had bubbles of air in them, and in the right side of the heart The brain was anæmic and contained frothy serum In addition to these symptoms was the extreme pallor of the surface, feeble pulse, jerky and rapid respiration and speedy collapse

It is thus demonstrated that Kiwisch's plan of inducing premature labor by the forced stream of water, that to admit a sudden volume of air into the womb while the sinuses are open, to allow the woman to be delivered in the standing position, to deliver her in the knee-chest position, as suggested by Ludwig under certain contingencies, are dangerous in the extreme In my case I can never be certain that air in the veins was the cause of the alarming condition, but I shall always believe so The sudden onset of the symptoms, their sudden disappearance and the favorable position of the patient, are the only evidences I have to offer to sustain my belief

I now turn to a consideration of shock or exhaustion as a cause of sudden death in childbed The phenomena of surgical shock are typically illustrated in the case reported at the beginning of this paper, and are almost exactly reproduced in a case within the last month I was hastily called in consultation by Dr McMurtry, who had an hour previously delivered his patient of her seventh child She was 42 years of age, very robust and an illustration of perfect health By overtaxing her strength in household duties labor was induced two or three hours in advance of maturity Labor came on rather precipitately, but aside from this, it was completed without an untoward symptom She informed her attendant that in her last confinement the hæmorrhage was alarmingly profuse Immediately after the expulsion of the fœtus, and before the placenta had been detached, Dr McMurtry noticed the pallor of countenance and the complete relaxation of the whole muscular system The heart was beating rapidly, could not be counted, and the second sound was obliterated The patient lay quietly, breathed easily, and presented a typical picture of surgical shock A noticeable feature was the very marked improvement at times of the tone of the circulation, and its sudden recession within a few seconds' time There were no convulsions, no loss of blood, and the only complaint was that of præcordial distress Dyspnœa came on gradually, and in exactly five hours from delivery she quietly passed away This was an almost exact reproduction of my first experience, and differed only in this, that in the first patient restlessness and great distress were prominent, and in the second they were not present at all

In the absence of any demonstrable evidence of

the presence of air in the veins or of embolism, we must attribute death to that mysterious complexus of symptoms we include in the general term of *shock*. Pathological investigation refers the phenomena of shock to a reflex paralysis of the vaso motor or splanchnic nerves, whereby the mass of the blood recedes from the surface and collects in the thoracic or abdominal viscera. Through this same influence the heart is enfeebled, and soon overworked by its ineffectual efforts at ridding itself of its constantly increasing burden, and finally yields to the pressure and ceases to contract. The condition is favorable to coagulation, and doubtless this often occurs.

In addition to the pains and exhaustion of child birth, mental emotions have no small part in the production of a state of the nervous system favorable to shock. The patient had been for a year brooding over a domestic tragedy, and made frequent visits to the State Prison to see her son, who was undergoing a sentence for murder. She was greatly humiliated, lost sleep, and was ready at all times to give way to the most wretched despondency. How great a part this circumstance had in bringing about the calamity we are unable to say. Lusk tells us that the homesick prisoner of war and the conquered soldier who is left on the field of battle yield with readiness to shock and perish from the most trivial wounds. We cannot ignore these facts, and must give prominent place in our classification to that at present unexplainable something we call shock.

Unless the case reported at the beginning as an introduction was one of embolism, I have never encountered the accident in my midwifery practice. As an autopsy was denied, the diagnosis is made solely upon the symptoms above detailed, and moreover, I cannot find a single report of an embolus having been discovered in an autopsy of a patient dying during or immediately after delivery.

It has been assumed for a number of years that the blood is in a favorable state for coagulation during pregnancy. This theory has been strongly maintained by Barker, Playfair, Meigs and others, and in clinical experience many striking facts have arisen to support this belief. Dr. Mary Putnam Jacobi reported a case similar to my first one to the New York Pathological Society, and exhibited the heart containing the clots, which she maintained were post mortem.

In all the cases reported the feeble circulation was always the first symptom to cause alarm, and, if coagulation takes place it is the result of this enfeebled circulation, and not its cause. The fact remains that numbers of puerperæ die and with symptoms as detailed above in these three cases. While there is great similarity in them, yet they are widely apart in many important particulars.

Now, it is not sound pathology to ignore these facts and to banish as unworthy of consideration a well established pathological condition, simply because in the days of ignorance the terms exhaustion and shock were indiscriminately employed to explain a multitude of cases which, with our present enlightenment, we know are due to the entrance of air into the circulation, and to pulmonary embolism. As the nervous organization of woman loses in powers of resistance as the penalty of a higher civilization and of artificial refinement, it becomes imperatively necessary for the physician to guard her from the dangers of excessive and too prolonged suffering. I have always urged the principle and have carried it out in practice, that the exquisite torture to which many women are subjected is unnecessary. The impression made upon a sensitive organization by prolonged and constantly increasing pain can and does result in damage to the central nervous system.

In a measure, then, we can diminish the liability to danger from shock and exhaustion by timely and judicious interference, to danger from entrance of air into the circulation by the position of the patient, the means employed in assisting uterine dilatation, but in the prevention of clot formation, in the light of our present pathological knowledge, we are powerless, and in the presence of either of these conditions we must stand helplessly by and say with Winckel, that the only thing remaining for the physician to do is to seek out the cause of death.

DISCUSSION

Dr. I. N. Rosenthal, of Fort Wayne, Ind.: Sudden deaths after parturition are fortunately very seldom, but they are nevertheless very terrible, and I hope to be excused if I report a case in full. A multipara was taken sick and confined about 8 P.M., and about 3 A.M. I was called by the attending physician. The lady was in a perfect frenzy of anxiety because the attending physician had stated to the parties that there was something wrong. I found a second fœtus in shoulder presentation, with no worse symptoms than would naturally be expected in a case of malposition or where labor was not normal. I turned the child without trouble, and after delivery the lady seemed to be perfectly happy and satisfied, and expressed feelings of gratitude and comfort. Within a half hour the attending physician and myself noticed the pulse becoming less, the lady felt as if she was fainting, but there were no other symptoms, the uterus was perfectly contracted, and no sign of hæmorrhage. The pulse continued to become weaker, and in less than half an hour the woman collapsed and death took place. What was the cause of death if it was not thrombosis or embolism? It certainly was not shock, there was no sign of sufficient shock for at least half an hour after delivery.

Dr. W. W. Grant, of Davenport, Iowa: There is one point of much interest in connection with this case which I do not think ought to be passed by unnoticed, and that is, whether we are as helpless as the author of the paper would indicate. It seems to me that in these cases of accidental hæmorrhage due to separation of the placenta, as distinguished from placenta prævia, it is just one of those slight hæmorrhages that come on previous to delivery. The hæmorrhage in this case was probably the cause of premature death, and is a very interesting point. These cases are not so uncommon, and it is a question whether we cannot do something to arrest that condition. I have recently had such a case, and have treated other cases, and I think something can be done to avert the embolism, whether it is from

air or blood, and that is the administration of ergot, even before labor in this case, I have done it systematically, have given ergot not in large enough doses to produce labor, but enough to produce a gentle, firm contraction of the uterus I gave it recently for three weeks, 25 drops Squibbs' extract of ergot That contraction is worth something even after delivery

DR W H WATHEN, of Louisville, Ky I was certainly very much interested in this excellent paper read by Dr Dunlap I was specially interested because I have had a misfortune somewhat similar recently, in which a lady was sent to me from a distance who had become illegitimately pregnant She came of a very good family, was very much depressed, and in fact had no desire to live She passed through her delivery, and in the second stage of labor the uterus contracted down and the placenta was removed without difficulty, and it contracted again In about five minutes hæmorrhage began and the uterus relaxed I introduced my hand very quickly and grasped the uterine cavity and the hæmorrhage ceased The woman lost probably eight or ten ounces of blood A hypodermic injection of ergot was given immediately We had no warm water, nothing but a solution of chloride of iron, one part iron to ten warm water The hæmorrhage immediately ceased, the uterus contracted down firmly, and remained contracted The woman did not bleed any more, her pulse was perfectly good, her respiration normal, no disturbance of any sort whatever In probably half an hour after this I felt the pulse and it was getting rapid, it had been 70 to 80, then 90, then it went up to 100, finally she was gasping for air, could not breathe, the pulse 110, and it finally disappeared altogether I gave hypodermic injections of whiskey, but she gradually grew worse, rallied again with external heat, grew worse, and in an hour died, remaining conscious until probably ten minutes before death This is a case in which it is difficult to understand the cause of death It certainly was not from shock, there was no apparent shock during labor or immediately after, and no apparent shock after hæmorrhage had ceased I could not account for it by air in the blood vessels, because if air had got in it would have been when the injection was used, and symptoms would have been manifested immediately I accounted for it by pulmonary clot, embolism, where probably the clot from the uterus was by some means taken up through the vena cava to the heart and then to the lungs If it was not a pulmonary embolism I am unable to account for it

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WOUND DRESSING SOME NOTIONS ACCEPTED AND SOME UNDER DISCUSSION

Read in the Section on Surgery and Anatomy, at the Thirty Eighth Annual Meeting of the Am Medical Association

BY GEORGE E STUBBS, A M, M D,

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In presenting a few thoughts upon the subject of wound dressing, I do not feel that I need to apologize on account of the triteness of the subject, since every surgeon of experience has ideas peculiar to himself on this practical subject, which should be cast in the common fund of information, to add if possible to the heritage of knowledge, which we have jointly received from the honored surgeons of the past I must, however, disclaim the idea of offering any notions that are very original, though I hope that from an experience of some twenty five years of military and civil surgery that I may present some ideas which may interest for a few moments, if they do not edify

But even if one cannot always present new and original ideas, as the result of patient, methodical research, it is often of great advantage both to the reporter and the profession to whom he reports, for the physician to take time to put himself upon a point of observation, and take a general view of ground gone over and of prospects ahead In doing this I am impressed at once with the rapidity of professional unification Where less than a generation ago surgeons in each country were a law unto themselves in the matter of surgical tenets, now, so closely do electricity and steam unite the World that the surgeons of every land are our brethren, and if Horsley of England removes a tumor from the brain, and his diagnosis and prognosis are both thereby verified, we clap him on the shoulder, in spirit at least, and hail him as our brother, if Billroth boldly takes the risk and operates for cancer of the pylorus, we fraternally admire his courage and zeal, and resolve to emulate his example as occasion demands, and when Keith presents his latest and best statistics in ovariotomy, we are ready to cry "bravo!"

With this diversion from my subject, let me now remark, *firstly*, that our ideas upon the subject of wound dressing are constantly changing, I find, on referring to many works of standard excellence in surgery, which grace my library, including the three immense tomes of the "Surgical History of the Rebellion," that many of the terms now constantly in use in our surgical literature, our surgical clinics and the surgical wards of our hospitals, and likewise in every meeting and discussion of well read medical men, are not even mentioned, indeed, such is the rate of progress, especially in the line of bacteriology, that surgical works published but five or ten years ago are now considerably behind the times

Most of the principles, however, of such works are still as true as ever, so far as experience has yet proven, just as we may still assert, that many of the principles handed down to us from Hippocrates, such as the application of bandages, and, in all severe wounds, rest, a strict regimen, and an easy position for the limb, the rejection of oil and all moist applications except poultices in certain cases

If I take up a certain standard work on surgery, I find under the general heading of wounds, the indications given thus

1st "The arrest of hæmorrhage," which probably all surgeons now would agree to at once, although Hippocrates believed in letting the blood flow copiously when situated upon the limbs or penetrating the cavities of the body

2nd The removal of foreign bodies, and then comes

3d The apposition of divided parts, for which the surgery of to day would substitute *antiseptic washing of the parts*, putting the injunction mentioned as the *fourth* in order of sequence, and then comes the general wise injunction "The use of such measures as will cooperate with Nature to the fullest extent in the repair of the damage"

This last phrase is so long headed in its foresight as to include all the bacteriological and other improvements, that all the Kochs, Pasteurs, Sternbergs and Cheynes are likely to invent in the next thousand years and is therefore admirable

But although all the surgeons as a rule believe in arresting all hæmorrhage before closing the wound, yet one point in regard to the blood is under discussion now, namely, is it best to leave a wound under a moist blood clot? From a careful review in the May number of *The Annals of Surgery* of Dr M Schede's (Hamburg) article in the *Archiv fur klin chir*, 1886, Bd 24, Hef, by Dr Browning, of Brooklyn, I learn that Dr Schede has summed up 241 such operations, including, *e g*, 40 joint resections, 18 excavations of tubercular foci in bone with free opening into relatively healthy joints, 30 total removals of small cheesy bones, 29 necrotomies, 20 Phelps' operations, 24 extirpations of tumor sacs, etc His procedure is the customary one as far as constriction, careful antisepsis with the one to one thousandth bi chloride of mercury solution, and complete removal of all diseased tissue It differs from the customary method in leaving one or two openings above instead of below in order to *collect* any oozing blood, and making a Neuber's button hole where the conditions demand The skin was approximated regardless of apposition of deeper parts In some cases, as in Phelps' operation, the wound was not closed No drainage was used but an imperforated silk covering, which should extend several centimetres beyond the wound edges This must fit the skin nicely, and serves the double purpose of insuring the filling of the wound, then also prevents any sucking up of the wound clots No other imperforate layer but gauzes, cotton, moss, sacks, and as perfect rest as possible Under such treatment, prompt coagulation, fibrination and cicatrization takes place The blood under such conditions fills in all angles and cavities Small bone cavities heal in from twelve to fourteen days, larger ones in three to six weeks He avoids putting foreign matter in wounds but uses catgut on occasion To keep the bones in place, he uses hard rubber splints, softened by boiling water to fit the part, and loosens the constriction for a time before bandaging, and ligates bleeding vessels He expects a good result, and accordingly does not remove a dressing though soaked in blood, if it dries If the soaking persists, he opens No constitutional disturbances occur except occasionally an aseptic fever for two or three days

It is said that the results were notably good The method has not been applied to operations on the hip joint nor on the soft parts of the body, except in tenotomies and deep lacerations with retraction Complete antisepsis is a necessity, where this seems questionable he fills the cavity with antiseptic material as gauze or bismuth, and waiting for granulations, these may then be slightly scraped, and the resulting flow of blood be utilized according to the principles already enunciated

Imperfect results arise from (1) flow of blood being insufficient to fill wound This is to be avoided by care at first (2) From fungus breaking down of the cicatrix (3) From any septic infection Foreign substances or sequestra naturally lead to a resulting fistula It is said that the use of antiseptic powders is not permissible in this method as the carbolic acid would likely be less satisfactory than the bichloride

We are accustomed to consider the union by what has been called first and second intention as two different and distinct physiological processes, but according to Zeigler these healing processes "are in principle the same" the difference being only in quantity

From time immemorial good surgeons have been accustomed to make use of the principle of specific gravity for the drainage of wounds, where possible, even using the knife boldly to that end For years drainage tubes of metal, gum or other material such as horse hair, chicken bones, or strings have been used to conduct pus out of deep cavities, in either case the appliances being made antiseptic Again sponges or iodoform gauze bags with antiseptic material for absorption purposes within, have been lowered or packed into cavities, and removed with the infiltrated fluids at short intervals

We have long appreciated the importance of correct hygienic surroundings such as pure air and water, good and easily digested food, clean rooms and bedding, and great cleanliness as to all dressings, and at this time still, many surgeons boldly assert that *cleanliness in all things* gives them, quite as good results, as are obtained by the most thorough antiseptic surgeons This is then one of the notions now under discussion Probably the large majority of the profession believe in antiseptic surgery, not Listerism *in extenso*, but careful antisepsis Yet there are those who assert that at this era in surgery, so well proved is the value of antiseptic surgery, that a surgeon should be held liable at law for damages, if, in the practice of surgery where he had failed to use antisepsis his patient was not healed

This is the bacteriological epoch in medicine, and never did surgery comprise so large a portion of the whole as now Where once our science had but the extreme injuries of the body for its field, now it halts at but few points, and perhaps I would be more accurate if I said that it halts at none

In the matter of wound dressing, the important discoveries in regard to the effect of bacteria are constantly increasing, and what at first and only a few years ago, was largely empirical practice, has now, almost, if not quite, reached the dignity and accuracy of a science Ogston has shown that all pus contains bacteria, that the more abundant the pus, the more bacteria are found The most valuable researches of Sternberg and others have show

us what agents are most effective in exterminating germs, but some of these while most effectual in killing germs, are deadly when used internally, and somewhat dangerous even in their external use We find a great diversity of views among different surgeons in different countries, and likewise among those of our own Some rely upon the bichloride solution of from 1 20,000 to 1 1000, others use carbolic acid solution, while many, as in Germany, pin their faith upon iodoform Others still use the one or the other for different purposes The opinion of surgeons, has not definitely crystalized as yet but I think it is fast doing so So rapidly are discoveries made, however, in this golden era of surgery, that we cannot forecast at all what even our immediate future may bring forth, but judging from the progress being made in this decennium, we have a right to expect great things

MEDICAL PROGRESS.

DIAGNOSIS OF SARCOMA OF THE BREAST.—In an article on "Sarcoma of the Female Breast," DR S W GROSS says

Between the spindle celled, round celled, and giant-celled there are marked similarities which render their differentiation difficult The spindle-celled, however, are characterized by their development at a comparatively early age, by the attendant suffering, by the enlargement of the subcutaneous veins, by their slow reproduction after removal, and by their long life The round-celled, on the other hand, appear, as a rule, at a comparatively late age, and are painless, but the skin is liable to be discolored and ulcerated, and recurrence is rapid, and the duration of life is relatively short The giant-celled likewise appear late in life, but are painful, discoloration of the skin and ulceration are also common, but there is no enlargement of the veins, while irritative enlargement of the axillary glands is frequent Local reproduction is delayed longer than in the other varieties, and the duration of life is remarkable These points are set forth in the following table, in which the affinities and contrasts of the three principal varieties may be seen at a glance

	Spindle celled	Round celled	Giant celled
Average age of appearance	36 years	48 years	47 years
Appear before the 16th year	12 08 per ct	0 83 per ct	0 per ct.
Pain	60 00 "	10 81 "	43 "
Skin discolored	20 88 "	32 35 "	25 "
Ulceration	17 58 "	23 58 "	25 "
Veins enlarged	17 58 "	11 76 "	0 "
Glands swollen	6 59 "	8 82 "	37 5 "
Glands infected	0 "	2 91 "	0 "
Adjacent tissues invaded	13 18 "	17 64 "	25 "
Local reproduction	65 10 "	60 "	57 14 "
" " average date of	12 months	4⅔ months	12⅓ mos
Metastatic deposits	20 40 per ct	25 per ct	0 per ct
Average life with operation	90 months	54 months	108 mos

Between the solid and cystic varieties there are certain distinctions, which are useful in establishing a different diagnosis The former develop at about the forty-third year, the skin is discolored in 11 53 per cent, ulceration occurs in 7 69 per cent , the veins are dilated in 7 69 per cent , there is no discharge from the nipple, nor is it retracted, pain is met with in 28 per cent , the surrounding tissues are invaded by tumor elements in 11 54 per cent , the lymphatic glands are enlarged in 11 54 per cent , and infected in 1 28 per cent , recurrence ensues in 64 58 per cent , and metastatic growths are met with in 25 per cent of all instances Cystic sarcoma starts, as a rule, at the thirty-eighth year, and is not, as is asserted by many writers, most common between twenty and thirty-five years, as just as many cases occur after as before the latter age, it grows more rapidly than the solid variety, and its increase is often sudden after having remained stationary or advanced slowly for some time Now and then, after evacuation of the fluid of the superficial cysts, their solid contents can be detected by manipulation, their consistence is, as a rule, unequal, and they are more largely lobulated than the former variety The skin is discolored in 34 61 per cent , the tumor ulcerates in 18 76 per cent , the veins are enlarged in 23 07 per cent , the nipple is retracted in 6 41 per cent , and discharges fluid in 10 25 per cent , pain is experienced in 41 93 per cent , the adjacent tissues are infected in 16 66 per cent , the lymphatic glands are swollen in 5 12 per cent , but they are never invaded by tumor elements, while it recurs in 51 16 per cent , and becomes generalized in 11 62 per cent of all cases

There are no signs by which cystic sarcomata can be absolutely differentiated from cystic fibromata, with which they are so frequently confounded The latter develop earlier in life, and a discharge from the nipple is more common than in the former, but ulceration and enlargement of the veins are only one-half as frequent, and they are not attended with glandular enlargement or malignant features It should, however, be stated that the largest proliferous cystic tumors met with in old, married multiparæ are generally sarcomata.—*American Journal Medical Sciences*, July, 1887

USE OF THYMOL.—DR FREDERICK P HENRY, of Philadelphia, says Following the suggestion of Martini, in the *Annali Universali di Medicina e Chirurgia* for February, 1887, I have recently prescribed thymol in a number of cases of intestinal diseases, catarrhs, acute and chronic, and typhoid fever, with the result of convincing me that it is a valuable adjuvant to our treatment of such affections I do not attach any particular significance to the fact that all the cases of typhoid fever, ten in number, to which I have thus far administered the drug, recovered, but my conviction that the course of the disease was most favorably modified by the treatment was shared by the resident physicians, by practitioners who visited the hospital for the purpose of seeing the cases, and last, and perhaps not least, by experienced nurses

The benign course pursued by these cases was especially evident when contrasted with that of an equal number treated without thymol during the first half of my hospital term The favorable effect of the drug was evinced by a steady descent of the temperature, by a gradual diminution in the daily number of stools, by the absence of mental excitement, and,

most conspicuously, by the clean, moist tongue presented in every instance One case caused some anxiety for a few days after his admission, on account of the presence of decided tympany and general abdominal tenderness, but these ominous signs gradually disappeared

I have also administered thymol, with good results, to several cases of intestinal catarrh, of which one is worthy of some detailed account Mary S , æt. thirty-six, married, was admitted to the Episcopal Hospital on May 14, 1887 She was pale, thin, and anæmic Seven years ago, after removing to Philadelphia from the country, she had an attack of "diarrhœa" (dysentery?) with from fifteen to twenty stools a day, in spite of treatment Defecation was painful, with marked tenesmus, and the dejecta were thin and streaked with bloody mucus Gradually the number of passages were reduced to from five to six per diem, and, for nearly seven years, notwithstanding treatment by several physicians, this has been the daily average Soon after admission she was given thymol gr x , ter in die, and the next day the number of stools was reduced to three A week later, she had a well-formed stool every second day, and expressed herself as feeling better than at any time during the past seven years On July 1, when my term of service expired, she was well, so far as the diarrhœa was concerned, but was still somewhat anæmic

The medicinal use of thymol is based upon its well-known antiseptic properties, and its action in the cases under consideration was favored by its great insolubility, which enables it to reach the intestine, mingle with its contents, and neutralize the toxic ptomaines that are formed in great quantity in catarrhs of the gastro intestinal tract In the opinion of many authorities, it is to the absorption of large quantities of these toxic products of fermentation and putrefaction that the so called typhoid symptoms are largely due These opinions do not rest solely upon theory, for it is found that, during the administration of thymol, phenol, which is one of the most constant products of intestinal putrefaction, and is almost entirely eliminated with the urine, is no longer found in that excretion

I have always prescribed the thymol in pill, of which the best excipient is medicinal soap, and, so far, have not given more than thirty grains in twenty-four hours—two two and a half grain pills every six hours This is a small dose, but I have seen no reason to increase it This may be done, however, with perfect safety, and, perhaps, with still better results It has been administered, with brilliant results, by Bozzolo, in cases of anchylostomiasis, in doses of from ten to twelve grams (two and a half to three drachms) per diem

The only case in which I found the drug to produce any unpleasant effect—slight digestive disturbance—was that of a woman with advanced phthisis, chronic diarrhœa, and who was, besides, the host of a tapeworm Thymol has been found to be an excellent tenifuge by several Italian observers, and it was for this purpose that I prescribed it in the case last mentioned The woman had voided no fragments of the worm for two weeks, and it was a question whether the parasite had been entirely expelled Although but a few doses of the thymol were tolerated, they were quickly followed by the expulsion of several fragments of the worm

Martini, whose experience with thymol has been large, has only found it give rise to unpleasant symptoms—delirium and stupor—in one case, that of a girl, æt 14, to whom 30 grains had been given in the course of two hours, the symptoms were transient, the treatment was resumed, and the case, one of typhoid fever, recovered without further mishap

Dr D J Milton Miller has continued the use of thymol in the medical wards of the Episcopal Hospital since he took charge of them on July 1, and writes as follows "Generally speaking, my success with thymol, in typhoid fever, has been most satisfactory The cases do seem to run a more favorable course than usual, as shown by lower temperature-range, less diarrhœa, the absence of complications, and even a shorter duration of fever "—*Medical News*, Sept 3, 1887

EUGENOL AS AN ANTISEPTIC —According to GEO H OCHSE, Ph G , eugenol, the principal component of oil of cloves, is found also in *Myrtus pimenta (Pimenta officinalis*, Lindley), *Amomis acris*, Berg *(Myrtia acris*, DeCandolle), *Canella alba*, Murray, *Dicypellium caryophyllatum*, Nees, and in *Ravensara aromatica*, Sonnerat Eugenol, a phenol like compound, is insoluble in glycerin and water, and is obtained as a residue when oil of cloves is subjected to distillation with strong caustic alkalies After the so-called light oil of cloves is distilled off, sulphuric acid or phosphoric acid is added, and by continuing the distillation without access of air eugenol is obtained Eugenol is an oily, colorless liquid, possessing the odor and taste of the oil of cloves to the highest degree In contact with air and light it soon aquires a brown color, it boils at 247 5° C , and has a specific gravity of 1 078 at 0° and 1 063 at 18 5° C Like phenol, which it resembles very much, it has no acid reaction, does not contain the group COOH, and also forms crystallizable compounds with alkalies When heated with hydriodic acid it evolves methyl-iodide, and when fused with potassium hydrate it forms protocatechuic acid, with baryta and tin-dust it forms about ten per cent methyl eugenol When taken internally the greater part of it is eliminated by the urine, in which, however, it cannot be detected by its odor not by distillation, but if allowed to decompose, the characteristic odor is at once perceptible, and when extracted with alcohol shows the characteristic deep green coloration with ferric chloride Eugenol has been given in doses of three grams per day dissolved in alcohol and diluted in water As an antiseptic, it is superior to phenol, as a febrifuge, it is not as efficacious as quinine, salicylic acid, antipyrin, or thaline —*American Journal of Pharmacy*, March, 1887

CÆSAREAN SECTION PERFORMED SUCCESSFULLY ON A COW —DR C HAMILTON, of Ringgold, Ga , writes On the 20th day of April I was called some dis-

tance in the country to see a patient On my arrival I was asked by a gentleman of the house to come out to the lot as soon as I had made a prescription for his daughter, whom I had visited In the lot I found a cow in labor, and had been for about twenty-four hours On examination I found that, owing to an injury that she had received on the railroad, there was not sufficient passage for the calf Its fore feet were protruding, and there was no room for the passage of its head The gentleman insisted on saving the life of the calf, so I concluded to perform the Cæsarean section, though I had never heard of this operation having been performed on a cow, so, without the use of any anæsthetic, I immediately began the operation by making an incision a little to the right of the median line, commencing just at the edge of the mammary gland, and cutting up made an incision six or seven inches long, and the cut in the uterus as small as would admit the calf As the membranes had not ruptured, I waited a few minutes and then proceeded to rupture them and deliver the calf In a few minutes it was up, walking about I used a catgut suture in closing the cut in the uterus A few minutes after the cuts were closed the cow got up and let the calf suck There was very little swelling or suppuration during the healing of the wound The lochial discharge commenced at once and continued its usual time I directed that she should be fed on meal and bran for fifteen or twenty days I learn that she has been giving sufficient milk for the calf all the time, and at this date is doing well, running in the range with other cattle It is strange to say that the protrusion of the membranes and the contraction of the uterus at the cut was just the same as at the mouth, showing very plainly that the contractility of the uterus is in every part and direction, while the uterus was cut laterally, the contraction was great and the pains as regular as during natural labor The cow struggled but little during the operation, and what little she did seemed to assist in delivery —*Southern Medical Record*, July, 1887

STRUCTURE OF THE UTERINE ARTERY —The phenomena of sexual life in woman necessarily involve frequent variations in the blood supply to the uterus and ovaries Professor Thoma has already noted the development of connective tissue in the tunica intima of arteries in relation to the mechanical conditions of the circulation Dr Westphalen, of Dorpat, has recently examined the uterine artery in order to see how the intima is arranged in that vessel He discovered that in childhood the intima consists of endothelium and of an elastic membrane which forms folds like a ruff when the vessel is empty Between these layers he found in places some elastic and muscular fibres, but very little connective tissue At the height of sexual life, however, a very distinct and thick layer of this tissue could be detected in the intima It increased in thickness as the vessel neared the uterus, and was most marked in women who were not very young and who had borne children Similar histological conditions were detected by Dr Westphalen in the intima of the ovarian artery, but in a much less marked degree This disposition of the connective tissue in the intima must depend upon the physiological peculiarities of the part which is supplied by the uterine artery A similar histological condition has been already noted in the splenic artery, a vessel which is also distributed to an organ subject to periods of physiological engorgement Dr Westphalen's researches appear in the form of a short note in the 106th volume of Virchow's *Archiv*, pt II —*British Medical Journal*, August 20, 1887

BONE PEG IN OPERATION FOR PSEUDARTHROSIS — At a recent meeting of the Paris Société de Chirurgie, a report of which appears in the *Deutsche Medizinal Zeitung*, M RICHELOT related the case of an hysterical girl, sixteen years old, with a congenital atrophy of the face, for which resection of a portion of the lower jaw was performed The fragments were united with silver wire, but the patient was restless, and the union which took place was by fibrous tissue Dr Routier subsequently drilled a hole through the fragments, excised the callus, and pegged the two parts of the bone together with a portion of the tibia of a calf, which had been steeped for twenty-four hours in a solution of 1 part of corrosive sublimate in a mixture of 900 parts of distilled water and 100 of alcohol Bony union followed, with only a slight asymmetry, and the patient could eat better than before No disturbances of the dental nerves were observed —*The New York Medical Journal*, August 27, 1887

INTRAPERITONEAL HÆMORRHAGE, REOPENING OF THE ABDOMEN —MR HENRY W FREEMAN, reports the case in which the bleeding came from a rent in the pampiniform plexus of the broad ligament, between the uterus and the stump of the clamped pedicle The rent was probably due to traction on the tumor in lifting it out of the pelvis before the pedicle was clamped No bleeding occurred when the pedicle was drawn upwards, owing to mechanical closure of the rent by the traction thereby exercised on the broad ligament He directs special attention to the fact that he was enabled to establish his diagnosis of secondary hæmorrhage (and thus save the patient's life) by means of the glass drainage tube which he had fixed between Douglas' pouch and the lower angle of the abdominal incision —*Lancet*, June 4, 1887

TREATMENT OF DUPUYTREN'S CONTRACTION OF THE PALMAR FASCIA —KOCHER advises excision of the fibrous constricting tissue This should be done through a single longitudinal incision, and in old cases where the cutis has become so intimately adherent to the underlying fibrous bands, a piece of the former should be excised To attempt to excise under these conditions only the contracting tissues would leave the overlying skin too thin, and thus the wound would heal by granulation, rather than by primary union, which is essential Gersuny has also practiced this operation with very good results —*Centralbl f Chirurgie*, No 27, 1887

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, SEPTEMBER 10, 1887

THE CONGRESS IN WASHINGTON

By the time this issue of THE JOURNAL reaches its readers the work of the Ninth International Congress will be concluded The dispatches from Washington state that the prospects are good in all respects for the Congress

On Monday at 11 A M, DR HENRY H SMITH, Chairman of the Executive Committee, called to order a large assemblage in Albaugh's Opera House, and after reviewing the history of the manner in which the Congress came to meet in America, introduced HON GROVER CLEVELAND, President of the United States, who said

"I feel that the country should be congratulated to day upon the presence at our Capital of so many of our own citizens and those representing foreign countries, who have distinguished themselves in the science of medicine and are devoted to its further progress My duty on this occasion is a very pleasing and a very brief one It is simply to declare that the Ninth International Medical Congress is now open for organization and for the transaction of business"

The Chairman of the Executive Committee then nominated the gentlemen agreed upon by the Committee to be officers of the Congress "For the high office of President of the Congress," he said, "the Committee unanimously nominate to you one widely known as a scientific practitioner, an able teacher, and medical author, Dr Nathan Smith Davis, of Chicago" Dr Davis having been elected by acclamation, he was escorted to the Chair by Dr Francesca Durante, of Italy, and Deputy Surgeon General Jeffrey A Marston, of her Britannic Majesty's Army The other officers were then elected as nominated, the Secretary General, DR JOHN B HAMILTON, Supervising Surgeon General of the U S Marine Hospital Service read his report, and DR A Y P GARNETT, Chairman of the Local Committee of Arrangements, announced the social programme for the Congress

The President of the Congress then introduced HON THOMAS F BAYARD, Secretary of State, who said

We welcome this Congress as guardians of the sanitation of the Nation In your profession we recognize the noblest school of human usefulness, and in the progress of the department of the development of the law of cure, the mitigation of suffering, the prolongation of human existence, and the efforts to discover the true principles by which life can be made "worth living" We have learned to appreciate our debt to those whose highest reward is the "still small voice of gratitude and consciousness of benefaction to the human race Gentlemen, I confidently promise your convention a worthy audience, not alone the members of your profession here assembled, nor the limited number whom this building can contain, but that vaster audience, to whom upon the wings of electrical force, your message will be daily borne far and wide to the listening ears of more than sixty millions of American citizens Sure am I that your message will be worthy, and equally that your thoughtful deliverances will be welcomed by a Continent The closer relations of mankind, which modern invention have induced, have necessarily been accompanied by an increased dissemination of disease, and the need is obvious of frequent international conferences, that, in the grand sweep of scientific observation, new discoveries in the healing art may be promptly attested and applied in counteraction Forgive me if as one of the great army of patients I humbly petition the profession that in your deliberations Nature may be allowed a hearing when remedies are proposed, that her vis medicatrix may not be omitted in computing the forces of cure, and that science may be restricted as often as possible to sounding the alarm for nature to hasten, as she surely will if permitted, to the defense of the point assailed My duty is very simple, and I fear I have already overstepped its limit, for there was indeed little more for me to say than to repeat the words of an ancient whose cottage was close by the battle field of Waterloo, and, being somewhat deaf, and hearing the sound of the artillery when the famous "pounding" was hardest, thought she heard someone knocking at her door and simply said "Come in" This may seem an unscientific illustration of auscultation and percussion, but you need not make half the noise of Wellington or Bonaparte, and I can assure you the American people will hear you and heartily say to you, as I do for them, "Come in"

The welcome was acknowledged and responded to briefly by Dr William Harris Lloyd, Inspector General of the Royal Navy, in behalf of Great Britain, Dr Léon Le Fort, of Paris, on behalf of France, Prof P G Unna, of Hamburg, on the part of Germany, Senator M Semmola, of Naples, for Italy, and Sir Charles Reyher, of St Petersburg, representing the Government of Russia Dr

Unna spoke in German, and Drs Semmola and Le Fort in French

The President of the Congress then delivered his Inaugural Address, which is published in another department of this issue of THE JOURNAL The number of members registered on Wednesday night was about 2,800 The largest number registered at a previous Congress was 3,182, in London, in 1881 But at the London Congress 1,145 resident physicians were registered, while in Washington there are scarcely 400 But not alone in numbers is this Ninth International Congress a success A glance at the programme of the Sections will show that as regards scientific value and interest it is second to no one of the preceeding Congresses

SARCOMA OF THE FEMALE BREAST

In an exceedingly valuable paper in the July number of the *American Journal of the Medical Sciences* DR SAMUEL W GROSS, of Philadelphia, presents a study of 156 cases of sarcoma of the female breast, which will be all the more interesting to those familiar with the chapter on sarcoma in his work on "Tumors of the Mammary Gland," in which is made the best existing attempt to determine the relations between the minute features and the clinical characters of sarcoma of the breast As already said, the cases studied in this paper number 156, including 19 of the author's cases

Of the varieties of sarcoma, says the author, the spindle-celled, which include the fibrous, constitute 68 per cent, the round-celled 27 per cent, and the giant-celled 5 per cent of all cases Of the subdivisions 50 per cent are cystic, including the barren and proliferous cysts, 50 per cent are solid or monocystic, 33 per cent are adenoid, the glandular structures persisting principally in the spindle-celled growths, 12 80 per cent are myxomatous, the combination being almost peculiar to the spindle celled and cystic tumors, 7 69 per cent are telangiectatic and hæmorrhagic, 7 per cent are cystoid, or the seat of softening cysts, 2 56 per cent are osteoid, 2 56 per cent are calcifying, 1 21 per cent are cartilaginous, 1 92 per cent are alveolar, 1 21 per cent are lymphoid, and 1 21 per cent are melanotic or pigmented

Circumscribed sarcomata, like other encapsuled neoplasms of the mamma, are ovoid, rounded or spherical, lobulated or bossed, seldom smooth and uniform, the surface irregularities are most marked in the cystic variety They are not, as a rule, attached to the gland, but push it aside, compress and flatten it, or cause atrophy of the gland The pure spindle celled and giant-celled tumors are firm, like fibromata, while the round celled are soft and elastic, but in about one-third of all cases the spindle-celled are soft, in which cases they are composed of small fusiform cells, or have undergone myxomatous or fatty transformation, or are the seat of interstitial hæmorrhage In about one-sixth of all cases the round-celled are hard, when they are usually rich in fibrous intercellular substance, they are therefore not synonymous with soft, medullary, or encephaloid sarcomata, though they are generally softer than the spindle-celled sarcomata on account of their structure As important points in the diagnosis between the small adenoid spindle-celled growths (adenoid sarcomata of Billroth) and fibromata of the same size, it may be mentioned that of the five specimens of the former which Dr Gross has extirpated all were lobulated, firm, elastic, adherent to the gland, grayish-white in color, and tough on section, while the fibromata are hard, merely nodular, less adherent to the mamma, white, and more compact and tough on section

It is infrequent that mammary sarcomata inflame and suppurate, but ulceration of the superjacent tissues occurred in 18 59 per cent of the cases collected—more than double as large a proportion as in fibroma As with fibromata, the ulceration seems to be the result of inflammation and gangrene, or merely rupture of the attenuated skin, rather than of infiltration by sarcomatous cells, but in one case it was due to exploratory puncture In 10 per cent of the cases the ulcer is in the form of a sloughing patch While fungous protrusion almost always follows perforation of the skin, in one case the ulcer healed The fungous protrusion, usually an intra cystic growth, varies from one-half up to 5 inches in diameter, exhales a sanguinolent and fetid discharge, which may become more or less purulent, the protrusion is not very prone to free hæmorrhage or sloughing The ulcer is usually circular, and the surrounding skin is generally not only free from coloration, but it is not attached to the fungus, and is everted, or rather elevated, on its sides Sometimes there are several ulcers, separated by bridges of sound tissue Ulceration occurred in 7 69 per cent of solid sarcomata, and in 18 76 per cent of cystic sarcomata, and was met with in 25 per cent of the giant-celled, 23 58 per cent of the round-celled, and in 17 58 per cent of the spindle-celled sarcomata

Of the 156 cases only 10 tumors were multiple, sarcomata of the breast are therefore generally solitary They are most commonly situated in the vi-

cinity of the nipple, and are usually found at the upper and outer quadrant of the breast when they arise from the circumference of the organ If central they are generally cystic, while when they arise from outlying lobes they are usually solid In either case they are disposed to extend beyond their capsules, those of central origin invading the whole gland and the surrounding soft parts, while peripheral sarcomata infect the latter structures and finally invade the whole breast Sometimes they are pedunculated, but usually they form broad based hemispherical tumors Of the cases in which the age was given, 148, 1 occurred as early as 9 years, 14 between 10 and 19 years, 16 between 20 and 29, 40 between 30 and 39, 39 between 40 and 49, 23 between 50 and 59, 14 between 60 and 69, and 1 at 75 years Only 4, 2 70 per cent appeared before the age of 16, or during the formative stage of the mamma, 67, 45 27 per cent between 16 and 40, the period in which the breast and genitalia are in most active function, and 77, 52 02 per cent, during the period of functional decline—after 40 years The average age for the development of the spindle celled tumors was 36 years 7 months, for the giant-celled 47 years 3 months, and 48 years for the round celled The average age for cystic sarcomata was 38 years 5 months, and for the solid sarcomata 43 years " Hence it may be said that spindle celled and cystic sarcomata are metaplasias of the functionally perfect mamma, and round celled, giant celled, and solid sarcomata are metaplasias of the declining gland " The etiology of sarcoma is certainly most obscure, its development can rarely be traced to injury or disease, it is uninfluenced by hereditary predisposition and the social state and menstrual irregularities or arrest play no important part in the production of the neoplasm

As regards the increase of sarcoma, it is more rapid than that of any otner neoplasm, but is very varied, being independent of the age of the patient, and influenced by the structure of the tumors, by their degeneration, and by the absence or presence of cysts Like cystic fibroma, sarcoma may remain stationary and of small size for a long time, when, without apparent cause, it suddenly begins to grow, and so rapidly that a nodule that has been 15 years in attaining the size of a walnut reaches that of a double fist in 3 months, or one that has been quiescent and of the size of a walnut for 25 years, suddenly begins to grow, and measures 18x14 inches in 3 years In these cases rapid accumulation of fluid and solid contents in the dilated ducts may be looked for, or the increased size may be due to myxomatous changes and interstitial hemorrhage The influence of increased flow of blood to the mamma, which has been assigned an etiological rôle by some authors, is not borne out by the cases analyzed by Dr Gross In short, the growth of sarcomata of the breast is so capricious that no average rate of increase can be assigned to them " On the whole, however, one is justified in concluding that the small celled, the cystic, the myxomatous, and the telangiectatic increase more rapidly than the large celled, the solid, and the pure tumors " Elevation of the temperature of the breast may be said to be characteristic of telangiectatic and rapidly proliferating growths Careful investigations in regard to temperature may establish some useful points in the diagnosis of connective tissue tumors

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In 1880 Dr S W Gross established the fact that all the varieties of sarcoma are malignant, and a study of 92 of the 156 cases now under consideration confirms that view Of the 92 cases 1 ran a natural course, being a case of round celled sarcoma of both breasts that proved fatal, with presumed secondary deposits, in 7 months from its first appearance The remaining 91 were operated on Of these 32 were well from periods varying from 1 month to 10 years and 3 months, in 42 there was local recurrence, in 8 there was both regional recurrence and mestastasis, 3 recurred, with evidences of general dissemination, in 4 cases there were metastases, and in 2 cases presumed metastases without recurrence So that 64 83 per cent of these cases were malignant 32 patients were well for an average period of 49 months and 10 days after the operation, the disease having existed for an average of 69 months and 11 days before operation, making the mean life of these patients almost 10 years Of the reproductions 57 7 per cent took place in 6 months, " while after 12 months there were only 13, or 28 8 per cent, and of these there were only 4, or 8 8 per cent after 2 years These statements lead to the belief that the chances for the patient are relatively good after the lapse of 2 years, and that the prognosis is all the more favorable as the period of freedom from signs of local contamination prolongs itself " The average date of recurrence was 10½ months, but the histological character of the growth appears to exert a marked influence on the date of recurrence The average date of the round-celled was 4 months and 20 days, for the spindle-celled 11 months 27 days, for the giant-celled 12 months 10 days Cystic tumors recurred in 8 months 5 days, and simple in 13 months 9 days—a contrast

which is "more striking when we state that the average date of recurrence for cystic round celled growths was 3 months and 4 days as against 6 months and 8 days for the simple round celled, and 9 months for cystic spindle-celled as against 16 months for the simple spindle-celled "

The age of the patient and the size and rate of increase of the tumor materially influence the prognosis Before the age of 35, when the mamma is most active, a small slowly growing sarcoma does not return, while a rapidly growing tumor, especially if cystic, will very likely recur The cases do not bear out the statement of some authors that the more tender the age the more rapid the growth of, and the more malignant, the sarcoma The analysis shows that "a sarcoma occurring in a functionally active breast evinces a marked disposition to recur after operation, with less disposition to metastases, while a sarcoma of the declining breast recurs less frequently, but is generalized in a greater number of cases " The histological character and stage of evolution of the tumor also affect the prognosis While the round-celled are most malignant, metastasis of the spindle-celled variety may be asserted, nor can it be said that cystic sarcomata are innocent or of limited malignancy, as it recurs in more than one-half the cases, and becomes generalized in 1 of every 9 cases The general and inaccurate statements regarding the malignancy of sarcomata lead to the belief that cystic sarcomata have been confounded with other cystic growths which do not infect the system Like carcinoma, sarcoma is a malignant growth, but differs from it in less frequent invasion of the skin, chest walls and paramammary tissue, less frequent invasion of the axillary glands, less frequent local recurrence after removal, more frequent metastases found *post mortem*, having a greater average duration of life (81 to 39 months), and more permanent cures (13 18 to 10 39 per cent, 4 years being taken as the period of safety)

Small, slowly increasing fibrous sarcomata are difficult of diagnosis, as they may be confounded with fibromata, especially when they arise at the circumference of the mamma "The diagnosis is based on their indolent origin, mobility, elastic or unequal consistence, their tendency to ulcerate, the not infrequent discoloration of the skin, and enlargement of the subcutaneous veins, and, possibly, elevation of the temperature, upon the suffering which they awaken late in the disease, and upon their greatest frequency after the fortieth year " Before the age of 16 fibromata and sarcomata are the only tumors met with, the former being twice as frequent as the latter Fibromata are always solid and grow slowly, sarcomata are cystic in 75 per cent of all cases, and medullary in the remaining 25 per cent, and usually grow rapidly Hence, at this period of life cystic and medullary tumors are sarcomata The more complete diagnosis of the varieties of sarcoma, as given by Dr Gross, is of sufficient interest to give entire in another column (p 336)

As regards the treatment of sarcoma little need be said "The entire breast, along with any skin that may be invaded, must be extirpated, especial care being paid to the complete removal of every particle of paramammary fat and the fascia of the pectoral muscle, in which tissue experience shows that recurrence takes place In the event of repullulation, the growths should be freely excised as fast as they appear, as such practice not only prolongs life, but may bring about a final cure " While the recurrent regional disease is more intense than the primary, and other recurrences follow rapidly, removal of the growths as fast as they appear alleviates suffering, prolongs life, averts visceral infection, and may lead to cure

SERIOUS ACCIDENT TO DR WETMORE —On Friday night, Sept 2, Dr A Wetmore, of Waterloo, Ill , walked off the St Louis special train *en route* to Washington, and received serious injuries to the head He was found in an unconscious condition near Pennboro', W Va , by a night watchman of the Baltimore and Ohio Railway, with a deep long wound in the head Late dispatches state that he is now improving, and will probably be well enough in a few days to be removed to his home

SOCIETY PROCEEDINGS.

AMERICAN DERMATOLOGICAL ASSOCIATION

Eleventh Annual Meeting, held in the Hall of the State Medical and Chirurgical Society, Baltimore, August 31 and September 1 and 2, 1887

WEDNESDAY, AUGUST 31 FIRST DAY

The Association was called to order by the PRESIDENT, DR H G PIFFARD, of New York

DR R W TAYLOR, of New York, read a paper on

TOXIC EFFECTS OF IODOFORM

The author reported the details of 24 cases, 9 of which came under his personal observation Sixteen of these cases were accompanied by constitu-

tional disturbance, while in 9 the rash existed alone without any apparent systemic symptom A large number of cases have been reported in which toxic constitutional effects have followed the use of iodoform It is evident that the toxic effects of iodoform are more frequently manifested by systemic irritation than in cutaneous manifestations The drug may set up inflammatory disturbance of the skin without apparent constitutional reaction

The skin affections may be classed under the general head, of dermatitis, but for the sake of accuracy may be further subdivided, according to their relative frequency, into erythema, eczema, and purpuric spots The erythema due to iodoform may present many of the features of similar eruptions Its mode of invasion is prompt and extension rapid It may commence at the point where the application has been made, or other patches of erythema may begin in other parts and extend to meet that from the original point Erythema may follow from simply smelling the iodoform The eruption completes its evolution in a few days and under favorable circumstances this eruption rapidly undergoes involution, behaving much as an ordinary exanthematous eruption Various forms of erythema have been noted Sometimes it is very superficial In other cases it is still superficial but of a deep red hue, and may be termed scarlatiniform In exceptional cases, usually those presenting grave constitutional symptoms, the erythema presents points of resemblance in hue and brawny feeling to erysipelas Other cases may be placed under the head of erythema multiformis The eczema resulting from the use of iodoform is usually of severe form and rapid evolution It may begin at the point of application or in parts at a distance It may also result from simply smelling the drug Its character is pronounced from the first A large surface is involved and in all respects it is similar to ordinary eczema marginans The involution is as a rule almost as rapid as the evolution if the drug is removed In some instances, however, the eruption shows a tendency to become chronic It is usually amenable to treatment Eczema occurred in 9 of the 25 cases reported

The time of the appearance of the eruption was noted as follows In 12 cases it began within a few hours, or within the first day, in 2 on the second day, in 3 on the third day, in 1 on the ninth day, in 1 on the twelfth day, and in 2 on the fourteenth day This is in contrast with the statistics of the onset of the symptoms where systemic poisoning results In the majority of these cases the morbid symptoms begin in the second week As a rule it may be stated that in proportion as the rash is slow in appearing, so are the concomitant symptoms severe Statistics seem to show that the cutaneous manifestations are most frequent in youth and middle age, while the systemic symptoms occur most frequently in the aged The erythema appearing upon the hands of dressers in hospitals as a result of the direct contact of the iodoform was regarded as being related to the ordinary hyperæmia induced by mustard and other irritating applications, and not to be considered as belonging to the class of cases described

Dr J Nevins Hyde, of Chicago I have seen the eczematous form of eruption, and also erythema multiformi, and in one case there was a bullous type of eruption resulting from the use of iodoform This occurred in a young man who had an operation performed for necrosis of the tibia Iodoform was used in the dressing of the wound The recovery was complicated with recurrences of erythema upon the surface of the body This occurred in the form of large areas of a vivid bright color, afterwards becoming dull Scattered over these surfaces were large bullæ containing a clear transparent fluid, and when ruptured produced superficial excoriated surfaces The condition was finally traced to the iodoform application, and within ten or twelve days after the discontinuance of the iodoform the eruption disappeared and did not recur I would dismiss from this category all cases in which iodide of potassium is given internally at the time that the iodoform is applied externally I suspect that in these cases, when the eruption occurs, it is due to the iodide of potassium, for we occasionally see cases in which iodide of potassium has been taken for a certain period without unpleasant effects, suddenly present manifestations of iodism as the results of some transitory condition, as change of climate, temperature, etc

Dr J C White, of Boston I have seen a number of cases of eruptions due to the free use of iodoform in the treatment of surgical injuries I have never seen systemic manifestations resulting from its use in cases where there was dermatitis The form of eruption has varied from simple hyperæmia up to the vesicular form, and going no further in most cases In occasional instances there appeared a furuncular form of inflammation, owing, possibly, to mechanical obstruction of the cutaneous follicles by particles of the powder The eruption is almost always found in the immediate vicinity of the point of application When the remedy is applied in the form of a powder it may easily be transferred to other parts of the body, and thus cause an extension of the eruption I have never seen any affections of the mucous membrane resulting from the use of iodoform, nor have I seen any purpuric eruption follow its use

Dr R W Taylor With reference to Dr Hyde's remarks in regard to the influence of iodide of potassium in those cases in which it was administered in connection with the local application of iodoform, I would state that in one case the eruption came on when the patient was not taking iodide of potassium, and was relieved when the iodide was given In one case the patient (a physician) thought that the eruption was worse when he was taking iodide of potassium, but the eruption always promptly followed the use of iodoform when no iodide was taken

Dr I E Atkinson, of Baltimore, read a

CLINICAL STUDY OF ERYSIPELAS IN CHILDREN

The author considered erysipelas to be a contagious infectious disease It has not yet been determined whether it is due to one special microorganism, or whether it may be produced by several The study

of the affection as it occurs in children offers some opportunities for the solution of this question During the first month erysipelas is extremely fatal, but the mortality gradually diminishes up to the end of the first year The fatality at this period of life is probably to be attributed to its dependence upon the poison of puerperal fever The author reported the detailed histories of three cases of erysipelas in young children In two of these cases a cellular board-like induration occurred as the result of intense œdema and cellular infiltration In neither of these cases was there suppuration The speaker thought that erysipelas should be considered the expression of the effect of one of a number of specific causes, and in that sense should be regarded as a symptomatic inflammation

DR J C WHITE, of Boston The author mentioned erysipelas as a contagious disease Does he personally know of a case in which it was directly transferred from one person to another He also referred to the use of the tincture of chloride of iron in the treatment of the disease, does he regard this as producing any specific therapeutic action?

DR ATKINSON Personally I have not seen an example of the direct contagiousness of erysipelas, but there are a number of well authenticated cases on record I cannot say that tincture of the chloride of iron is a specific, but in my experience it has had a more favorable influence on the course of the disease than any other remedy that I have employed

DR WHITE I have never seen a case of facial erysipelas transferred from one person to another If at all contagious, it must be so with extreme rarity I regard tincture of the chloride of iron and all other internal remedies as useless in the treatment of this form of erysipelas For five years I have given no internal medicine in the treatment of erysipelas, and I have not seen a case in which the erysipelas eruption did not disappear in from five to ten days In my experience, infantile erysipelas has been so wholly unlike, in its clinical aspects and its course with or without treatment, ordinary traumatic erysipelas, that it seems to be quite a distinct disease

DR J NEVINS HYDE I have seen one case which seemed to indicate the contagious nature of erysipelas A young mother soon after confinement had her ears pierced for ear-rings This was shortly followed by typical erysipelas spreading over the face and scalp Soon the nursing child was affected with the disease and presented typical erysipelas, from which it promptly died I agree with Dr White that the tincture of chloride of iron is useles in the treatment of the affection, although I consider it harmless

DR ATKINSON In those cases of erysipelas which may be termed septic, whether the disease depend upon ordinary septic poison or not, I have no doubt that benefit is derived from the administration of the tincture of iron in large doses, as much as 3ss three or four times a day

DR R B MORISON, of Baltimore, read a paper on

LEUCOPATHIA UNGUIUM, A PECULIAR AFFECTION OF THE NAILS

The ordinary white spots found on the nails are well known, they are gradually forced to the outer edge of the nail by the growth of the new nail behind, in from 4 to 6 months These spots are usually irregular in shape A young lady, age 20, recently came under the author's care, in whom these spots were uniform The nails showed white bands $\frac{1}{16}$ inch wide, extending across the nail from border to border The nails were perfectly smooth, and in other respects normal, and the general health good These white bands had appeared regularly for many months During the previous summer the bands disappeared almost entirely The toe nails were not affected, and the hair was not grey Microscopic sections were made by cutting the white lines at right angles By direct light the lines appeared of a a pure white, while the remainder of the section was of a dark color Acetic acid and other agents caused the lines to disappear, as did Canada balsam It seemed clear, then, that the lines were due to air-spaces in the nails

DR J NEVINS HYDE, of Chicago, read a paper on

THREE CASES OF SIMULTANEOUS HAND AND FOOT DISEASE

Case 1—C B, æt 19, came under observation in May, 1887 Family history good, he denied specific disease Three years ago he noticed the first signs of the present affection on the fingers and later on the toes The disease then extended to the palms of the hands and the soles of the feet The local affection had gradually increased, and he complained of the stiffness thereby induced The free border of the nails was tilted away from the fingers, and the space thus left was filled with hardened matter The substance of the nail was dry and rugous He had recently noticed some sweating of the hands The palms of the hands and soles of the feet presented a condition of tylosis The nails of the toes were tilted away from the phalanges, and presented a condition similar to that seen in the nails of the fingers There was also bromidrosis

Case 2—A female, æt 24, family history good The patient presented tylosis of the hands and feet, which continually recurred Careful examination showed her general condition to be fair The pulse was unusually slow, 50 a minute in the sitting posture The hands were cold and bathed with profuse perspiration The finger-nails were somewhat rugous, and tilted from the fingers, and the space filled with grayish masses The same condition existed in the nails The palms of the hands and the soles of the feet were simultaneously involved, showing callosities Every six or eight weeks there was a reformation of the masses on the soles of the feet At no time did the tissue beneath these masses present a sound appearance Treatment with various measures, continued for a long period, had no apparent effect

Case 3—Male, æt 28, with a good family history and no history of syphilis, for two years had noticed some numbness of the lower extremities, especially marked at night There was entire absence of hair on certain parts of the lower extremities He stated that 15 years before, he had been struck on the head

with a brick, and that a few years before coming under observation an operation had been performed upon the head, the exact nature of which he could not state The hands and feet were habitually cold Broad vertical areas, chiefly on the outer aspects of the limbs, were found in which not a single filament of hair could be detected Two of the finger nails of the right hand showed marked vacuolations

DR L A DUHRING, of Philadelphia I do not recall a case of white spots upon the nails in which the distribution was as uniform as in the one described by Dr Morison I have however, met with cases calling for treatment I have regarded the affection as dependent upon a want of nutrition in the nail tissues, and with that view have used arsenic with satisfactory results This acts upon the nervous system, improving the nutrition of the whole member and the finger nails in particular

DR P G UNNA, of Hamburg With reference to Dr Morison's paper, I would say that we know from the labors of various investigators that the presence of air in the horny tissues is always a secondary phenomenon The horny masses must be changed before they will allow the entrance of air These white spots in the nails are analogous to medullary substance I have seen cases similar to those described by Dr Hyde, in which the affection was not only simply of the nails, but also of the hands and feet, and I have allied them with eczema My principal reason for so doing has been that in some cases I have seen combined with the disease of the hands, patches of eczema on various portions of the body

DR R. W TAYLOR, of New York I should regard the cases described by Dr Hyde as ordinary cases of tylosis of the hands and feet This may occur idiopathically, or as a result of chronic eczema, or as a result of chronic syphilitic psoriasis

DR LEGRAND N DENSLOW, of St Paul I am not in accord with Dr Hyde in his view of the nature of the cases he had described I have regarded such cases as instances of callosities With reference to treatment, I would say that in my last case, in the person of a hotel porter who was unable to perform his duties on account of the tender condition of the soles of his feet, I first removed the callosities by the application of a saturated solution of salicylic acid in collodion, and then made a false sole for the feet by the application of belladonna plaster spread upon kid By this means he is able to attend to his work in comfort

DR L D BULKLEY, of New York I have under my care a patient who presents a condition of the nails very similar to that described by Dr Morison She is a sufferer from gout, and from her family history I thought these lines were possibly gouty deposits I think, however, that Dr Morison has shown their true nature

I agree with Dr Taylor in considering the cases reported by Dr Hyde as closely allied in their nature to cases of eczema In the treatment of these cases I have derived considerable benefit from keeping the parts constantly macerated by the use of an oiled-silk lining sewed into an ordinary stocking and worn constantly, night and day

DR E WIGGLESWORTH, of Boston I have now under treatment a case similar to those described by Dr Hyde I have regarded it as a case of tylosis In the treatment I have employed a 20 per cent solution of salicylic acid in emplastrum saponis until the callosities were removed I have then dressed the parts with equal parts of belladonna and mercurial plaster spread on kid Regarding the condition as dependent upon lowered nutrition, I also employed tonics with good effect

DR G H TILDEN, of Boston In connection with Dr Morison's paper I would mention a case which I recently saw It was a case of two nails growing on one finger, one above the other The patient had one year ago met with an accident which destroyed the nail, and evidently split the matrix into two halves, and each half had produced a separate nail

THE PRESIDENT The affection described by Dr Morison is one with which, in its mildest form, we are all more or less familiar The most aggravated case that I have seen has come under my observation within the last two weeks This case presents fully as extensive leucopathia as the case reported to-day, although not so regularly distributed This condition is analogous to leucopathia of the hair, in which I have satisfied myself that the condition is due to fatty degeneration of the cells and subsequent absorption of the fat In the case of the nail, after the absorption of the cells which had undergone fatty degeneration, the horny nature of the tissue would prevent closure of the cavity, which would remain filled with air

DR HYDE I would merely state that, like Dr Taylor and Dr Bulkley, I first regarded these cases as instances of tylosis, but a large experience showed that this view was not correct In one case I have watched the course of the disease for three years The parts have been macerated for days and weeks at a time I know that there is a constant new formation of these masses I know that the nails are continually undergoing a similar process These cases are entirely different from the ordinary forms of tylosis and callosities

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AFTERNOON SESSION

DR L DUNCAN BULKLEY read some

CLINICAL NOTES ON PRURITUS

Pruritus or itching is an extremely common symptom resulting from various causes, many of which are recognizable There are a certain number of cases in which the pruritus appears without apparent cause It was only this last group of cases that were considered In the present state of knowledge, it is not possible to determine the exact lesion in these cases Pruritus may be defined as a functional disturbance of the nerve elements of the skin, resulting in itching, and dependent upon local irritation or local lesion Out of a total of 5,000 cases of general skin diseases the author had records of 80 cases of pruritus, a proportion of about 1 75 per cent 30 of the patients were females and 50 males In the majority of cases there was some chronic disease, such as

gout, albuminuria and chronic bronchitis, or marked evidence of lowered general vitality The cases were classed under the following heads, according to frequency Pruritus hiemalis, pruritus genitalis, pruritus ani, pruritus vulvæ, pruritus scroti, and pruritus senilis In quite a number of instances, the pruritus proved rebellious to treatment Temporary benefit was obtained in some cases, while in others no relief resulted from treatment The author was of the opinion that in many cases the condition resulted from reflex irritation In connection with this subject the author referred to 115 personal observations which he had made These consisted in the production, either accidentally or intentionally, of a point of irritation in some part of the body, and in noting the point at which itching was experienced The observations were made with the object of determining whether or not there were crossed reflexes The reflex sensations cannot be induced at will, but seem to be more readily brought about when the body is fatigued 84 of the observations related to the right side of the body, while 31 relate to the left In all but 3 cases the reflex occurred on the same side as the point of irritation These three exceptions were as follows irritation on inside of right knee, reflex itching felt at left scapula, irritation of right thigh, four inches above the knee, reflex at the insertion of the left deltoid, irritation of the left heel, reflex at right side of the pubes Irritation in the same locality will frequently, on different occasions, produce reflexes in entirely different localities The results have been so varied that it is impossible to classify them into definite groups

DR F B GREENOUGH, of Boston, read some

CLINICAL NOTES ON PEDICULOSIS

The speaker had been induced to examine this subject on account of the fact that the statistics of the Association had shown that there was a greater proportion of cases of pediculosis reported from Boston than from any other city He had found, taking the statistics for nine years, that the proportion of cases of pediculosis to the total number of cases of disease of the skin was, in Boston, 5 5 per cent , in New York 3 per cent , in Philadelphia 3 33 per cent , Baltimore 2 12 per cent , St Louis 1 5 per cent , Chicago 3 per cent , and Canada 3 3 per cent In 1884 New York reported, out of a total of 2,737 cases of skin disease, no cases of pediculosis of the head During the same year the number of cases of pediculosis pubes reported from Chicago equaled that reported from all of the other cities The only explanation of this fact that can be offered is that the difference is more in observers than in the number of cases of the affection An observer in one city may put under the head of eczema capitis a case which would be considered in Boston as one of pediculosis capitis There are three different forms of pediculi the pediculus capitis, the pediculus corporis and the pediculus pubis, and these pediculi are rarely seen except in their own locality The presence of pediculi in large numbers causes cutaneous trouble So far as the efflorescence goes, the eczema thus induced is identical with that due to other causes The distribution and other conditions make the diagnosis easy The speaker had only in one instance noted the pediculus corporis on the skin, and he thought it possible that they may feed without leaving the clothing

DR L H DUHRING, of Philadelphia My experience with a certain number of cases of pediculi vestimentorum is that they do leave the skin, and I have seen them feeding upon the skin

DR J C WHITE, of Boston In regard to diagnosis, I have seen cases in which I have been able to make the diagnosis without looking at the head In children, where there is an eczematous eruption in certain respects resembling impetigo contagiosum, located around the orifice of the mouth, the nostrils, and the lobes of the ears, I make the diagnosis of pediculosis of the scalp Another practical point is that pubic lice do not always confine themselves to one locality, but may be found in different parts of the body Careful examination will show them not only in the axilla, but also in the lower extremity In one case, that of a child, I found the pubic lice in the hair of the head If the treatment is limited to the pubic region the results may be unsatisfactory In the treatment of pediculosis of the pubic region and of the head I always use crude petroleum This does not produce the slightest irritation upon the most inflamed surface It is allowed to remain in contact with the hair for two or three hours

DR P G UNNA, of Hamburg In Vienna it is the custom to consider every case of pustular eczema of the head and scalp as due to pediculi, without making any further examination This is, I think, a mistake Although pediculi may be present in these cases they may only be secondary manifestations, resulting from the good feeding ground furnished by the diseased surface

DR J N HYDE, of Chicago The great predominance of cases of pediculosis pubis in Chicago, which has been referred to by Dr Greenough, may perhaps be explained by the fact that during the winter season, when navigation is closed, many seamen congregate there During the summer these men have been engaged along the coast, and have indulged in all kinds of debauchery They come under observation often in a very vile condition, suffering with syphilis, pediculi and blenorrhagia

DR L D BULKLEY I have heard no reference to a little lesion made by the perdiculus corporis, to which attention has been directed by Dr Tilbury Fox, and one which he considers of diagnostic value This is a little hæmorrhagic spot resulting from the insertion of the proboscis of the pediculus into the follicle of the skin in the process of feeding I should like to know if any of the members here have put any trust in this as a diagnostic sign?

THE PRESIDENT A number of years ago I collected several pediculi vertimentorum and watched the process of feeding I was able to verify the statement of Dr Tilbury Fox The sucker of the pediculus corporis is not a cutting instrument It is apparently inserted into a follicle After its removal a minute droplet of blood will appear, which after a few hours becomes black This sign is often of consid-

erable value in diagnosis In the treatment of this affection crude petroleum seems preferable to kerosene, which is sometimes used I know of two cases in which the use of kerosene produced a violent dermatitis Crude petroleum is less irritating

Dr J C White, of Boston, read an

INTRODUCTION TO THE STUDY OF DIET IN THE PRODUCTION AND TREATMENT OF SKIN DISEASES

Many articles of diet are considered both by the people and by the profession as injurious in certain affections of the skin The author held that in regard to many of these articles, there was no evidence of their injurious effects, with the exception of popular belief, and that they should not be discarded until more proof was advanced against them Among various substances considered injurious in skin diseases, butter was mentioned, but the author regarded pure uncooked butter as entirely harmless so far as the skin is concerned Oatmeal and buckwheat have been classed in the same category, but the speaker thought that there was no foundation for such a belief The same remarks would apply to fish and meat, which have been regarded as harmful by some dermatologists Dr White then mentioned certain articles which in his experience had seemed to be prejudicial in certain skin affections Alcohol aggravates the course of inflammatory condition of the skin In some, lager beer will produce a crop of acne over the lower half of the face The eating of acid fruits may cause an acute eczema Strawberries often cause urticaria Apples are said to produce an acneform efflorescence about the mouth Some nuts, especially the English walnut, may produce inflammation of the mucous lining of the mouth Shellfish and crustaceans may occasionally give rise to urticaria Other meats may at times produce similar effects The worst case of giant urticaria that the speaker had seen had followed the use of roast turkey

Dr J N Hyde I can agree with the speaker in regard to most of the articles mentioned I should, however, put oatmeal on the black list I have seen a case in which facial efflorescence is always produced by the ingestion of this article, even when used without the addition of anything else I have in several cases thought that urticaria had been induced by the use of the Natal or seedless orange When urticaria follows the use of the grape, I think it is principally due to the fact that the seeds and skin of the grape are also swallowed

Dr E B Bronson, of New York While these articles of diet may have no specific effect on the production and course of skin affections, they may act in a reflex manner by causing disorders of the digestion Many of them probably owe their effect to the fact that they are unaccustomed articles Newly arrived emigrants frequently suffer from erythema and urticaria, this is especially true for emigrants from Ireland This I have attributed to the radical change made in the diet and have had good results by ordering the patient to return to his former diet consisting largely of potatoes

Dr E Wigglesworth, of Boston I think that with oatmeal the effect depends largely on the size of the grain and the method of cooking If not thoroughly softened it may cause irritation of the mucous lining of the stomach and bowels, and induce urticaria, which as a result of scratching may pass to secondary eczema It seems to me that salt air has some injurious effects in cases of eczema My patients with eczema are better in the mountains than at the sea shore In the case of acne it is the reverse, such patients are usually benefitted by the sea air

Dr G H Rohe, of Baltimore There seems to be no doubt that certain articles, such as crabs and oysters, affect the skin more frequently than other articles, and yet I know of no article so readily digested as oysters The fact that they are unaccustomed articles of food may explain their effects to a certain extent I have seen pruritus induced, as I supposed by the use of buckwheat

Dr P G Unna In my private hospital I allow a liberal diet, and I rarely find it necessary to impose any restriction I make it a point, by close questioning, to find out what articles seem to unfavorably influence the condition, and then direct that they be avoided I have seen urticaria produced by strawberries in cases in which the berry has not been swallowed, but simply placed in the mouth

Dr L D Bulkley I have more than one patient who cannot take raspberries without having urticaria In some cases pineapples have a similar effect Personally I pay a good deal of attention to the diet Milk has not been referred to, I see many patients in whom injurious effects have followed the use of milk with the meals If taken between meals it produces no injury I have found that almost every case of acne is aggravated by soup taken with the food

Dr LeGrand N Denslow, of St Paul I think that in this connection the quantity of food taken is of importance Many people who do not lead active lives eat too much, and I have found it of advantage in certain cases to restrict the patient to one meal a day, allowing him, however, to eat all that he wants at this time I would add to the injurious articles already mentioned, pork, veal, and anything fried

(To be concluded)

FOREIGN CORRESPONDENCE

BASLE AND FREIBERG[1]

Formation of Fat and Causes of Obesity—Immediate Coaptation in Compound Fractures—Skin Grafts—Scoliosis in School children—Hydronephrosis—Antagonism of Germs—University of Basle—Antiseptics—Socin—Fæcal Fistula—Excision of Larynx for Carcinoma — Supra pubic Cystotomy — Volvulus — Intra-glandular Enucleation of Struma—Garre—Fehling — Hegar — Myo fibroma Uteri—Colpo perineorrhaphy—Wiedow—Kraske—Extirpation of High Rectal Cancer—Coxitis—Osteotomy for Rickety Legs

Dear Dr Fenger —While in Basle I attended the meetings of the Medical Society of Basle and of the

[1] By permission of Drs Fenger and Senn

Central Verein, the latter is a National society representing the German Cantons, and has 1,100 members The Basle Medical Society met the evening before the meeting of the Central Verein, and was attended by many of the visitors Professor Massini, the President, made a short address and introduced Professor Bunge, who read a paper on "The Formation of Fat in the Body, and the Causes of Obesity," the subject being treated from a strictly scientific and chemical standpoint He showed clearly that fat is produced from fat, other hydrocarbonaceous food and albuminous substances The causes of fat accumulation were attributed to want of muscular exercise and consumption of alcohol He said that dieting in the treatment of obesity was useless and often dangerous, and advised as the safest, most rational and most efficient treatment, active muscular exercise and abstinence from alcoholic drinks As no one responded to the invitation to open the discussion on the paper it must be taken for granted that the views advanced represented those of the members present

The Central Verein held a meeting which lasted only one day At 9 A M the members visited the different clinics, where the directors presented interesting cases with brief practical remarks Professor Socin talked to about fifty members on the "Treatment of Compound fractures by Immediate Coaptation" He recommended the introduction of ivory pegs about three inches long, and as large as the medullary cavity, into the shafts of long bones as a direct means of coaptation He showed three cases in which this treatment had been successful, the ivory having healed in It is certainly a triumph of antiseptic surgery that such a large foreign body can be introduced into the medullary cavity without causing serious disturbances or materially interfering with the normal reparative process, but I doubt very much if Professor Socin, should he have the misfortune to sustain a compound fracture of the leg, would submit to such treatment That medullary tissue takes an important part in callus formation after fractures no one can deny, and that it is not good surgery to crush this tissue with such an enormous ivory plug hardly requires an argument I suggested to him that if such treatment is to be adopted it would be decidedly better not to use solid cylinders of ivory, but hollow tubes which answer the same mechanical purposes and would not interfere with the formation of an internal callus, and at the same time would not tax the resources of nature in her efforts to remove the foreign body by absorption For myself I should prefer to secure the advantages of immediate coaptation not by plugging the medullary canal, but by making perforations in the compact layer at corresponding points, and introducing small bone nails The perforations would only hasten the inflammatory osteoporosis, which must precede callus-formation

Several cases of genu valgum and curvature of the legs were shown in which the deformities had been corrected by osteo clasis with Robin's apparatus Socin speakes favorably of Robin's osteo clast as a substitute for osteotomy

Cases were also shown in which large cutaneous defects after operations were treated by transplantation of large skin grafts by Thiersch's method For success the whole surface must be covered with grafts, which must be very thin Usually on the third day, when the dressing is removed, the surface is found dry and the grafts firmly adherent

At noon the meeting was formally opened by the President, Dr Sonderegger Professor Kocher read a paper on 'The Prevention of Scoliosis in School-children" He believes that structural and architectural changes are produced in the vertebræ by pressure and rotation caused by faulty desks in the school room As the best and surest means to prevent lateral curvature of the spine he recommends a desk with a movable top, which can be so arranged that while the child is writing the erect position cannot be changed

Dr Haffter reported a case of hydro nephrosis cured by making an abdominal fistula

Dr Garrè read a valuable paper on "Antagonism among Germs" He has made many careful experiments to determine the effect of a culture of germs on different culture substances, and after removing the germs he inoculated the same soil with other germs From the results thus far obtained he finds that some germs affect the soil favorably for the growth of other forms of germs, while in other cases he finds a direct antagonism For example, a soil impregnated with the ptomaines of the *bacillus fluorescens putridus* remains perfectly sterile when inoculated with pus microbes These investigations have an important practical bearing

The University of Basle does not admit female students The medical class numbers 120, of this number about thirty pass their final examination annually About twenty five attend the surgical clinic The surgical wards are on the first floor of the Burgerspital, and contain eighty beds Corrosive sublimate (1 1000 to 1 5000) is used as an antiseptic, and for dressing sublimated gauze, dry, and cushions of sublimated wood-wool Catgut ligatures are prepared by simple immersion in an alcoholic solution of sublimate (1 1000), and material prepared in this way has always been found sterile by Garrè Dressings are usually not changed oftener than every eight to twelve days

Professor Socin is a splendid lecturer, an impressive and somewhat stern teacher, and a good operator He is always thorough in making a diagnosis, and never lets a student off until every "what else could it be" has been exhausted

In his wards was a young man who received a penetrating wound of the abdomen when 3 years old A fæcal fistula remained, and he was brought into the hospital and placed under Socin's care twenty years ago Examination showed that the cæcum was injured, and the fistulous opening was repeatedly cauterized, but failed to close A number of operations were performed but without avail, and the child left the hospital with the fistula About a year ago he came back for the second or third time, and as intestinal surgery had made great progress since their former attempts both surgeon

and patient had new hope of success The opening was closed at least half a dozen times, but instead of becoming smaller the fistula got larger, as at each operation more tissue was removed A few weeks ago it was determined to detach the adherent bowel more thoroughly, which was done without opening the abdominal cavity, and the parts were accurately coaptated with three rows of sutures, this time the operation was a success At present only a superficial granulating surface marks the site of the former fistula, and the patient is in excellent health

In the female ward I was shown a case of unilateral excision of the larynx for primary carcinoma of the larynx The patient was 50 years old, and had had a goitre since childhood At the time of the first operation the portion of the larynx removed was firmly adherent to the struma, and it was suspected that the disease had extended to the tumor, but it was not thought wise to expose the patient at this time to the additional risks of another serious operation The struma continued to enlarge rapidly, and as soon as the patient had sufficiently recovered from the larynx extirpation the struma was removed She recovered well also from this operation, but has been unable to take food *per os*, as during the act of swallowing it passes into the larnyx and causes asphyxia She is fed exclusively by the stomach tube She breathes through a tracheal tube, and there has been great difficulty in keeping the larynx patent, as its lumen has become greatly contracted by cicatricial tissue Dilatation is now practiced by introducing bougies from the tracheal wound upwards

The benefits to be derived from supra-pubic cystotomy are well shown in the case of a man 45 years old, who was brought into the hospital suffering from symptoms indicating stone Careful exploration failed to find a stone, but in the eye of the catheter was removed a fragment of tissue which the microscope showed to be carcinomatous The bladder was opened above the pubes, and the edges of the visceral wound stitched to the external incision Digital exploration through the opening, and examination with reflected light, showed that the neck of the bladder was surrounded by a carcinomatous mass which had evidently started from the mucous membrane The whole mass was removed with scissors, spoon and Paquelin's cautery, and the bladder drained The patient has been comparatively free from pain since the operation Though a recent examination showed that the disease is returning, the palliative effect of the operation was marked

A case of acute intestinal obstruction was brought into the hospital recently, and on palpation a well-defined tumor was felt just above the umbilicus, the abdomen was considerably distended An incision was made through the linea alba, and the tumor came at once in sight and proved to be a volvulus, a large loop of the small intestine with a long mesentery being twisted one and a half times around its axis and fixed in this position The volvulus was easily corrected, intestines returned, and the wound closed Vomiting ceased promptly, the bowels soon moved spontaneously, and the patient is now convalescent

Of the many operations which I saw I will only detail two intra glandular enucleations of struma Recent studies as to the nature and structure of struma, especially by Wolfler, have shown that in majority of cases these tumors are atheromata, and appear as distinct circumscribed tumors with a proper capsule in the substance of the thyroid gland An adenoma, when it has undergone extensive cystic degeneration, becomes a struma cystica For many years Socin has recognized these facts, and has substituted for the majority of cases what he has termed intra glandular enucleation in place of excision He claims that this operation is easier of execution, and that it does not require the unnecessary removal of glandular tissue He has done the operation fifty-seven times, and has never had a fatal result or serious complication from the operation The most important step of the operation consists in finding the exact boundary line between the glandular tissue and the capsule of the tumor If this place be not found, or be lost during the operation, the surgeon is led astray, and may incur serious hæmorrhage I was very anxious to see the operation performed by Socin, and as no case was on hand we hunted through the hospital and finally found a man about fifty years old, who had lost one of his legs by amputation for tuberculosis of the ankle-joint, and who fortunately had a struma, and enough courage to submit to another operation

The tumor was located in the median line of the neck, and was a little larger than a hen's egg A straight incision was made over the centre of the tumor, and as the capsule was adherent anteriorly some tissue was lost in separating the adhesions and finding the exact line between the capsule and parenchyma of the gland After this was found it took only a few minutes to complete the operation Hæmorrhage was arrested temporarily by compression, until the bleeding points were found and seized with forceps After bleeding was arrested the wound was drained, sutured and dressed in the usual manner

The second case came into the hospital next day, and was a legitimate case, as she had come to have the tumor removed She was forty five years old, and had had a goitre since childhood Three distinct tumors could be felt in the substance of the gland As the bulk of the mass was to the right of the median line a long incision was made along the anterior border of the sterno mastoid, and a careful dissection made down to the largest of the three tumors After its capsule was carefully exposed the enucleation was done in a few minutes Quite a number of forceps were used to arrest bleeding After all vessels were ligated the other tumors were attacked through the same incision, and removed in the same manner When all tumors which could be felt before the operation were removed, it was found that the gland was still large, and at least four more tumors were enucleated through the first incision After enucleation suturing is done very carefully first the gland tissue is stitched together, next muscles and fascia, and finally the skin Socin claims that the wounds after enucleation heal better

than after excision, and that the cosmetic effect is also decidedly better

Socin has established a nice private laboratory at his own expense in his own house, and has placed his private assistant, Dr C Garrè, in charge of it Garre has done some of the best work in bacteriology that I have seen in Germany or anywhere else Socin will find that he has made a good investment which will bring compound interest, if not in dollars and cents at least in the satisfaction that he has been instrumental in the advancement of scientific research One of the attractions in the hospital is the beautiful collection of gunshot wounds which Socin brought with him from the Franco-Prussian war, and which he has presented to the hospital museum

The chair of gynecology and obstetrics recently made vacant by the resignation of Professor Bischoff has been filled by Professor Fehling, of Stuttgart I attended the second clinic he gave, and heard an excellent discourse on congenital syphilis All the students who attend his clinic must wear linen coats, which are furnished by the hospital Professor Fehling is a thorough student and an excellent teacher, and his new field of labor will afford ample opportunity to increase the reputation he already enjoys

From Basle I went to Freiberg, i B , and remained two days for the purpose of familiarizing myself with the work of Professors Hegar and Kraske Freiberg has only 25,00 inhabitants, and yet the University has 1,100 students, of which 500 are studying medicine, an example of the over-production of medical men in Germany

Professor Hegar, by his appearance and habits, might readily pass for an American He is fifty-seven years old, but physically well preserved In his clinical instruction he is very thorough, and rarely ever takes more than one patient to fill the hour During this whole time the patient is kept chloroformed, and from six to twelve students are called upon to examine the case Hegar told me that unless the patients were anæsthetized they would not submit to such wholesale and public examinations No students who are dissecting or working in the laboratory are allowed to make these examinations, and they must disinfect their hands thoroughly with warm water and soap and spirits of turpentine When the list of names is read off and the name of a student is called who has been recently exposed to infection he answers "inficirt," when he is allowed to remain in his seat In dealing with his patients Hegar is not particularly kind and gentle, and he invariably addresses them with the familiar "du " In his examinations he is very thorough, but his manipulations are not noted for their gentleness His lecture room is always crowded with students, who appear to enjoy his peculiar temper

I was present when he performed a very difficult operation on a patient who had a complicated history and *status præsens* She was about thirty years old, and ceased menstruating in February For several weeks she had been flooding almost constantly On examination she was pronounced pregnant Professor Hegar places great confidence and importance in certain conditions of the upper portion of the cervix as an almost infallible sign of early pregnancy, and was the first to describe this condition He asserts that at the junction of the cervix with the uterus during the early months of pregnancy the tissues become so soft and yielding that on being compressed between the index finger introduced into the rectum and the tips of the fingers of the other hand applied over the pubes, it becomes almost as thin as cardboard, the tips of the fingers almost meeting, while the lower portion of the cervix, on account of the firmer anatomical conditions, has not lost its resistance Among other signs this condition was present in the case As it was almost certain the fœtus was dead, or had already passed away, he decided to clear the uterus of its contents With forceps and curette large masses of placenta were removed, and on exploring the cavity of the uterus with the index finger, to ascertain whether any fragments remained, it was found that a large interstitial myofibroma projected into the uterine cavity from the right side Under the unfavorable conditions it was deemed dangerous to leave the tumor, and he decided to remove it through the vagina On account of the narrowing of the cervical canal it was difficult to make the tumor accessible The cervix had to be dilated again and again, until finally the tumor could be seized with forceps, when it was drawn down, and the mantle of uterine tissue divided with long curved scissors, after which the tedious process of enucleation began Although only the finger and dull instruments were used the hæmorrhage was profuse, and the woman became evidently anæmic towards the end of the operation, which lasted at least an hour After the enucleation the uterine cavity was thoroughly irrigated and disinfected, and after drying it thoroughly with a sponge it was packed with iodoform gauze, with a view of securing drainage

Hegar looks upon vaginal enucleation of uterine myo fibroma as one of the most difficult operations, and in this opinion he is sustained by most operators who have had experience with the operation When a man like Hegar approaches such an operation with trepidation, how must an ordinary surgeon or gynecologist feel when he undertakes such a case? He has had sixty-seven cases of abdominal section without a fatal result His great hobby is colpo perineorrhaphy, the only operation, he says, for which he is willing to give a guarantee in every case I saw his son in-law, Wiedow, perform this operation twice, and I must say that I have never seen anything more neat and perfect before or since For suturing fine silver wire is used exclusively, and the vaginal sutures are allowed to remain for four or five weeks In a case that Hegar had operated upon two and one-half years before, and which I was requested to examine to see the final result, one of the sutures remained, and was removed this time The secret of his great success with this operation undoubtedly depends on the accurate suturing Three kinds of sutures are used alternately, so as to secure perfect approximation and coaptation deep, half

deep, and superficial The first are passed completely out of sight, the second are visible only in the centre of the floor of the wound, while the third embrace only the mucous membrane The sutures are cut quite short An ordinary long curved needle is used for passing the sutures For the dissection an ordinary scalpel is used, while the scissors only come into use in smoothing the surface

The gynecological and obstetrical wards are in a separate building from the main hospital, and contain eighty beds A good many of Hegar's and Wiedow's operations are performed in a private hospital in charge of Sisters of Mercy

Professor Kraske, formerly Volkmann's assistant, is a young, but promising surgeon who has been in his present position but a short time His wards contain 160 beds, and permit a large material for clinical teaching He is thoroughly antiseptic in his operations He has recently proposed and practiced a new operation for the extirpation of high rectal cancer, which consists in partial resection of the sacrum in order to secure better access to the disease He has performed the operation five times, and says he has reason to be satisfied with the results One of his patients who was operated on some time ago still remains in the hospital, and in a comfortable condition

During the clinic I attended he presented a number of cases of coxitis before and after operation, and made some general remarks on this disease He places great stress in placing the limb in the abducted position after the operation, so as to bring the upper end of the femur nearer to the acetabulum A moderate degree of motion in the hip after operation he considers an ideal result

He also operated on a rickety child with extreme curvature of the legs The greatest curve was near the upper epiphyses of the tibiæ, with the convexity directed outwards Osteotomy with the chisel was performed on the concave side of both tibiæ The bone was exposed by a straight incision, the periosteum divided and reflected, and with Volkmann's chisel the bone was divided sufficiently for it to be fractured by moderate manual force The wounds were sutured and dressed, and the limbs placed upon a posterior splint

As I was following Professor Kraske through his wards a messenger brought word that one of his patients had died suddenly When we reached the place one of the assistants had just finished a rapid tracheotomy, and by artificial respiration succeeded in restoring the patient The patient was an old man who was brought into the hospital a few days before with a tumor of the upper jaw and an inflammation below the tongue A sudden œdema of the glottis caused asphyxia, and life was restored only by the prompt action of the assistant

N SENN

DOMESTIC CORRESPONDENCE

ERYSIPELAS AND PUERPERAL FEVER

Dear Sir —After reading an article in THE JOURNAL of August 20, by A MacLaren, M D, I wish to give a short detail of facts in the way of counter current On August 13 I was called to see Mr T, just brought home suffering from a very severe attack of facial erysipelas, for which I attended him eight days The third and fourth days of the attendance I saw him twice daily, as he was delirious, and in a state of great prostration On the fifth day of my attendance I opened an abscess that had formed beneath the right eye, and which, on pressure, discharged a large quantity of offensive pus

At 2 A M, August 14, I was called to Mrs H, in (second) labor She was delivered at 6 A M, labor being natural and easy I dismissed her on the 18th, convalescing favorably At 6 A M August 15 I was called to Mrs G, in (first) labor She was delivered at 4 P M, having had an unusually painful and difficult labor This same evening I drew the urine with a catheter, as she was unable to pass it, and suffered greatly for an hour before I was able to attend her She sat up yesterday for the first time, and has had no unpleasant symptoms On August 20 I attended Mrs H, miscarriage at four and a half months She is doing well and has no symptoms of fever

At each visit to the case of erysipelas I washed my hands thoroughly before leaving the house In my visits to the other cases mentioned I washed my hands, and then wetted them thoroughly with antiseptic cologne No other precautions were used

Theoretically, I ought to have refused to attend the cases of confinement, or one of the cases should have had puerperal fever I think the danger emphasized in Dr MacLaren's article has been exaggerated, and that with ordinary care and cleanliness the obstetrician may continue his attendance on cases of scarlet fever and erysipelas

ALBERT REYNOLDS, M D
(University of Vt 1864)

Clinton, Iowa, August 24, 1887

NECROLOGY

WILLIAM MORROW BEACH

Dr William Morrow Beach was born in Amity, Madison Co, O, May 10th, 1831, and died at his home near London, O, May 5th, 1887, aged 56 years Left at an early age to the care of a widowed mother whose scant means gave him but slight opportunities for an education, his indomitable energy surmounted all difficulties and he reached the front rank among those of professional and general culture A student of Prof Samuel M Smith, of Columbus, O, he was graduated from Starling Medical College in 1853, and immediately entered upon the practice of his profession at Unionville Centre, O In 1855 he removed to LaFayette, O, and in 1865 to the beautiful farm where he continued to live until his death

In April, 1862, he entered the service of the U S Army as Assistant Surgeon, and joined the Army at Shiloh just after the great battle at that place As Surgeon to the 20th O, and later to the 78th O, he

was in June, 1864, commissioned Surgeon of the 118th O and served with that regiment until his muster out in June 1865 In 1869 he was elected, as a Republican Representative in the State Legislature, and two years later was elected State Senator He was an active worker in Medical Societies, having served as President of his County Society, District Society, State Society, and was first President of the State Sanitary Society, he was also a prominent member of the American Medical Association

As a practitioner he was careful and attentive, giving his time and best efforts to his patients regardless of their ability to pay To his brother physicians he was courteous, and to the younger members of the profession particularly attentive Through his industry and ability he amassed wealth, which to him seemed only a means of doing good to others He was possessed of rare amiability, great kindness of heart, and a courtesy that won him many friends

BOOK REVIEWS.

EVACUANT MEDICATION (Cathartics and Emetics) By HENRY M FIELD, M D, Professor of Therapeutics, Dartmouth Medical College, etc 8vo, pp 288 *Philadelphia* P Blakiston, Son & Co 1887 Chicago W T Keener

Dr Field has written a book that may be said to stand alone in medical literature A practical work on the indications, action, application and contra-indications of cathartics and emetics is something that, so far as we are aware, did not exist in medical literature until the appearance of this book Many practitioners have favorite "purgatives" which they are inclined to use indiscriminately Dr Field's little book will be of great value to such, if they study it, as well as to others The book is one of much value, and there is nothing that can take its place The only criticism to be made is that no mention is made of the use of glycerine in combination with castor oil, which, in small doses, is a most valuable evacuant in cases of impacted colon

A LABORATORY MANUAL OF CHEMISTRY, MEDICAL AND PHARMACEUTICAL, containing experiments and Practical Lessons in Inorganic Synthetical Work, Formulæ for over three hundred Preparations, with explanatory Notes, examples in Quantitative Determinations and Valuation of Drugs, and short systematic Courses in Qualitative Analysis and in the Examination of Wine By OSCAR OLDBERG, Pharm D, Professor of Pharmacy and Director of the Pharmaceutical Laboratories in the Illinois College of Pharmacy, etc, and JOHN H LONG, Sc D, Professor of Chemistry and Director of the Chemical Laboratories of the Chicago Medical College and the Illinois College of Pharmacy, etc With original illustrations 8vo, pp 435 Chicago W T Keener

This book is conveniently arranged in three parts, The Elements, Synthetical Chemistry, and Analytical Chemistry The elements are treated of in 78 pages, the necessary information, including tests, being given concisely and clearly In the part on Synthetical Chemistry we find an excuse for quarreling with the authors they do not tell us how to make antipyrin, thallin, kairin and some of the other substances that have been brought out by the attempts to make quinine synthetically The chapter on urine analysis is incomplete But for all this we do not know of a laboratory guide that is better suited for the student, and especially for medical students It contains all that any medical student can hope to learn, with directions how to do it—and very much more than many teachers of medical chemistry know It is *the* laboratory manual for the student—and no one can learn chemistry outside of a laboratory As will be seen, much of the table of contents is given on the title page

BERND'S PHYSICIAN'S POCKET REGISTER Henry Bernd & Co, 2,631 Chestnut St, St Louis, Mo

This is a perpetual visiting list and physician's account book, most conveniently arranged It contains no "dose list" or other printed matter generally found in visiting lists, but as a register, account book and pocket ledger it stands at the head It contains an erasive memorandum tablet, on which the visits to be made during the day may be recorded It is elegantly bound in full seal

MISCELLANEOUS.

CHOLERA IN INDIA —A Reuter telegram from Simla, of August 15, states that in the Northwest Provinces 70,000 persons died from cholera during June and July, but thus far this report has not been confirmed

"EL SEHA" is the title of a monthly Review of Public Hygiene and Medical Science, the first number of which appeared on August 1 The editorial corps consists of Dr H R Greene Pacha, Dr Issa Pacha Hamdi, Dr Mahmoud Bey Sidky, Dr Mahmoud Bey Mustapha, Dr Hassan Effendi Kourchid, Mr J Price, Dr Hassan Bey Rifki, and Ibraham Bey Mustapha

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM AUGUST 27, 1887, TO SEPTEMBER 2, 1887

Lieut Col Joseph R Smith, Surgeon, ordered to report in person to the Surgeon General of the Army, on September 2, 1887, on business connected with the public service, and on completion thereof to return to his proper station Par 9, S O 198, A G O, August 26, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING SEPTEMBER 3, 1887

Medical Director Richard Dean, detached from duty as member of Examining and Retiring Boards, and to Hospital, Chelsea, Mass
Medical Director George Peck, orders as delegate to International Medical Congress revoked.
Surgeon M H Simons, detached from "Constellation," and to the Naval Academy
Surgeon B F Rogers, detached from Marine Rendezvous, New York, and to the "Alliance"
Asst Surgeon James G Field, detached from the "Vermont," and to Marine Rendezvous, N Y
Asst Surgeon C P Henry, ordered to the "Ossipee"
P A Surgeon G P Lumsden, to the "Boston"
Asst Surgeon Louis W Atlee, restored to duty

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ORIGINAL ARTICLES.

THE SURGICAL TREATMENT OF SUPPURATIVE PLEURITIS IN CHILDREN

Read in the Section on Surgery and Anatomy, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY A Y P GARNETT, M D,

OF WASHINGTON D C

In the very brief paper which I shall present, it is not my purpose to discuss the history of this disease, its etiology, its pathology, its progress or its general treatment I propose simply to confine my remarks to the comparative merits of the operation of removing the pus by the old method of the trocar and drainage tube, with the more modern one of resecting or excising a portion of one or more ribs, restricting this comparison of the two surgical procedures, to the cases ocurring in children

It is known that as far back as the time of Hippocrates, the operation for the removal of pleuritic effusion, whether of pus, serum or blood, was practiced by the ancients, many crude and imperfect instruments being employed for this purpose, and circumstantial details of all the minutiæ necessary at each stage of the operation laid down by Hippocrates himself Not until 1665, however, we are told, was the ordinary trocar introduced and the operation of draining off the contents of the pleural sac by this means resorted to

It was demonstrated that the supposed danger of introducing atmospheric air into the pleural cavity was and still is, greatly exaggerated, and the consequent employment of the trocar for this operation became more general Scultetus, perhaps the most ingenious and skilful surgeon of his day, invented several instruments for this purpose constructed upon the principle of the trocar, but so arranged as to prevent the admission of air into the pleural cavity He also was the first, so far as I have been able to learn, to use a drainage tube It is not necessary, however, in tracing the history of this instrument in this connection, that I should follow its varying popularity, its triumphs and its defeats through a period of two or more hundred years, we will leave the discussion by its advocates and its opponents, preceding the present half century, and endeavor to present a brief outline of its use during this latter period The late Professor Gross, in the second volume of his "Surgery," after giving in detail minute directions how the operation of tapping the chest empyema should be done, using of course, the trocar, says that of 820 recorded cases but one death occurred by hæmorrhage in this operation, of 498 cases collected by Gunther in 1861, 302 were cured, 149 died, sixteen were improved, nineteen recovered with fistulous openings, and of twelve the result was unknown Of 132 cases reported by Dr Brady, 79 were cured In a number of those which ended fatally irremediable ravages of the disease had occurred before the operation was done and others died of phthisis Dr Blake, of Boston, reported in 1879, nineteen cases operated on by incision as a means of introducing the drainage tube with fifteen recoveries It is very much to be regretted that these cases have not been classified according to age, as the omission deprives us of the opportunity to compare the relative mortality between the adult and the child In view, however, of the advanced and chronic condition of the disease so much more frequently met with in the adult with its accompanying results of extensive bands of adhesion, fibrous deposits and inspissated pus, it is fair to presume that the mortality was largely due to the fact that a majority of those operated upon were adults If, however, with the acknowledged unfavorable conditions found in adult cases, such gratifying results could be obtained by the trocar alone or only partial drainage, how much greater success would have been achieved had these operations been confined alone to children, and if we add the still greater advantage of having used the drainage tube in each case, the result would undoubtedly have been more conclusively successful Before further discussing the advantages of using the trocar and drainage tube over the operation of removing portions of ribs in children, we will refer to the recorded statistics of each of these procedures, embracing *First*, a tabular statement prepared by Dr Godlee of thirty four cases of empyema in children treated at the North-Eastern Hospital, London, including four cases treated at the Brompton Hospital, *Second*, nineteen cases from the reports of St Thomas' Hospital of children under 3 years of age.

Gross somewhere speaks of having operated 150 times by tapping followed by successful results in a majority of the cases, and Dr Henry I Bowditch in a letter recently addressed to me speaks of his last operation by tapping as the 399th In neither of the latter reports have I been able to find that any tabulated statement was ever prepared, giving age, date of operation, specific conditions of each case and results in each

TABLE OF CASES REPORTED BY DR GODLEE

No	Age	Duration	Treatment	Result	No
1	1 year	3 months	Aspirated January 9 1883, 1 pint Jan 23, 6 oz Jan 30, 4 oz Opened Feb 10, behind, rib removed	Death Empyema on opposite side	1
2	1 yr 3 mos	1 month	Aspirated July 11, 1884, opened July 26, part of 8th rib removed behind	Cured in six weeks	2
4	2 years	6 weeks	Opened August 1, 1885, rib removed behind tube out August 13	Cured in four weeks	4
5	2 yrs 4 mos	9 weeks	Aspirated July 4, 1885, opened through abscess July 7, tube removed July 15 Part of 7th rib removed tube put back Aug 7 finally removed Aug 15	Cured in nine weeks	5
6	2 yrs 5 mos	14 days	Aspirated Aug 14 1883 opened, rib removed behind Aug 17, tube removed Sept 1	Cured in five weeks	6
7	2 yrs 6 mos	8 months	Aspirated Feb 9, 1885, opened, rib removed behind, Feb 28, tube replaced twice, counter opening June 17	Left in September, not quite healed	7
8	3 years	2 months	Aspirated Aug 20, 1883, opened August 24 rib removed behind tube removed Oct 2	Practically cured in eight weeks	8
9	3 years		Aspiration failed opened Nov 14, 1883 rib removed behind	Cured in ten weeks	9
11	3 years	5 months	Aspirated Dec 3, 1883, 2 oz, Dec 4 1 oz opened, rib removed behind Dec 7	Practically cured in seven weeks	11
13	4 years		Aspirated Oct 31, 1884, 29 oz, sweet Dec 8, expectorated, 2 oz, fetid opened Jan 25 1885 rib removed behind, pus fetid	Cured in eight weeks	13
15	4 years	2 months	Aspirated Aug 9, 1885 Opened Aug 5 rib removed behind Tube removed Aug 26, put back Aug 31, finally removed Sept 16	Practically cured in five weeks Tube removed too soon	15
3	1 yr 10 mos	3 months	Opened Nov 23, 1881, behind tube out Dec 13	Cured in five weeks	3
10	3 years	6 months	Aspirated Nov 25, 1884, 5 oz very thick pus	Cured by one aspiration	10
12	3 yrs 4 mos	3 months	Aspirated May 12, 1885, 4 oz	Cured by one aspiration	12
14	4 years	3 months	Aspirated April 28, 1884, one syringeful	Cured by one aspiration	14
16	5 years		Aspirated April 7, 1882, 10 oz, April 9, 7 oz Opened April 10 Tube re inserted Sept 9	Practically cured in six months	16
17	5 years		Aspirated July 24, 1883, 4 oz, July 26, 11 oz Opened Aug 12, rib removed behind, tube left out Aug 29	Cured in four weeks	17
18	5 years	1 month	Expectorated two months after commencement of illness	Cured	18
19	5 years	5 months	Part of 7th rib removed and tube put in Feb 17, 1883, left out March 27	Cured in six weeks	19
20	5 yrs 6 mos	2 weeks	Aspirated April 13, opened, 10, rib removed behind	Cured in eight weeks	0
21	5 yrs 6 mos	10 days	Aspirated June 10 1882, 26 oz Opened July 1, 7, interspace, July 7, rib removed, tube left out Sept 2	Cured in fourteen weeks	21
22	5 yrs 6 mos	4 days (?)	Aspirated May 12, 1884, opened 27, rib removed July 13, second opening further back	General health good, but sinus remains Sept, 1885	2
23	6 years	5 weeks	Aspirated Jan 29 1885 subcutaneous rupture near nipple February 7, opened through abscess 6th interspace, no rib	Cured in eight weeks Trouble with tube	23
24	6 years	4 months	Aspirated Jan 10, 1885 opened, rib removed behind, 26th	Small cavity remaining three months	24
25	6 years	4 months	Aspirated Nov 18, 1884	Cured by one aspiration	25
26	6 years	6 weeks	Aspirated July 7, 1885, opened, rib removed behind 17th, tube rem'd 29th	Cured in three weeks	26
27	7 years	3 weeks	Aspirated Aug 24, 1883 27th, 4 oz Sept 1, 9 oz Opened, rib rem'd behind Sept 8, tube left out 20th	Cured in three weeks	27
28	8 years		Aspirated April 10, 1882, opened 21, 7th interspace, no rib	Cured in four weeks	8
29	9 years	9 days	Aspirated May 2, 1882 3 oz, 5th 22 oz, 19th 20 oz Opened 23d, no rib Tube removed July 19	Cured in nine weeks	9
30	10 years	12 months	Opened through abscess in 7th interspace, no rib, March 31, 1883 Pus vomited during operation	Practically healed in seven weeks	30
31	5 yrs 6 mos	5 months	Sept 6, 1883, piece of 6th rib outside nipple removed healed reopened Nov 30	Never completely healed Died afterwards of bronchitis (A very delicate child)	31
32	6 yrs 6 mos	3 months	June 18, 1885, incision	Healed in three months	32
33	7 years	1 month	Aug 27, part of 7th rib removed	Healed on Sept 22 (under five weeks)	33
34	10 years	5 months	Dec, 1883, openings dilated Feb, 1884, parts of 5th, 6th, 7th and 8th ribs removed July 11, several other pieces of rib removed Nov 20, openings into 1st intercostal space	Much improved All closed but a minute cavity, into which a straight celluloid tube 2½ in long was inserted	34

The above statistical table, examined in detail, shows that the ages of those operated upon ranged from 1 year and 3 months to 10 years and 5 months Three under 2 years, four under 3 years, five under 4 years, three under 5 years, eight under 6 years, five under 7 years, two under 8 years, one under 9 years, one under 10 years, and two under 11 years Of the first group one was aspirated three times, no drainage tube used Rib resected at the end of one month, died One aspirated once, no drainage tube, rib resected fifteen days later, recovered in five weeks

Of the second group one was resected and cured in four weeks, three were first aspirated, no drainage tube, subsequently resected and recovered Of the third group, three were aspirated, no drainage tube use, finally portion of rib removed, followed by recoveries, two were cured by one aspiration Group four shows that all three were aspirated, followed in two of them by excision of rib, with recovery in all three cases Of the seven cases included in the fifth group, five were first aspirated, no drainage used, followed by removal of ribs in each case, resulting in cures The remaining two were subjected to resection of ribs without being previously aspirated, also resulted favorably The sixth group included four aspirations, no drainage tube in either case, subsequent resection of ribs with three cures and one partial success Group seven embraces but two cases, one aspirated before the resection was performed, and the other rib excised at first operation, both cured The eighth and ninth groups including one case each, both aspirared at first, but subsequently opened by incision and drainage tubes inserted, one recovered in four weeks and the other in nine weeks The tenth group numbers but two cases, one cured by pleurotomy and drainage tube, the other greatly benefited by extensive resection of parts of the fifth, sixth, seventh, and eighth ribs, but not reported as cured It thus appears of the thirty one cases reported as cured in this table, twenty five were subjected to the antecedent operation of aspiration, and six to primary resections Four of the twenty-five were cured by one aspiration alone, the remaining twenty-one were all subsequently treated by removal of one or more ribs It will be observed that in all the cases in which resection was practiced, the drainage tube was inserted and retained, as a rule, until the cure had been completed Had such a plan been adopted in the first instance, when the operation of tapping was performed, it is more than probable that not one of the twenty-one children so treated would have been subjected to so grave and hazardous an operation as excision of the ribs The four cases of recovery by one aspiration alone goes to demonstrate the conservative capacity of nature when left in a large degree, to her own resources, as well as the energetic and active process of absorption going on in childhood

An analysis of this table shows that all but one of these cases were subjected to the operation of tapping before excision of the rib was resorted to In one case four antecedent tappings, two cases of three tappings, two cases of two tappings, and nine having been tapped but once As it was found

THE RESULT OF EXCISION OF A PORTION OF RIB IN FIFTEEN CASES OF EMPYEMA, FROM ST THOMAS' HOSPITAL REPORTS, LONDON

No	Age	Tapping before Operat'n	Side	Tube used before Operat'n	Chronic Fistula	Ab Callus	Result
1	5½ male	4	Left	None	None	None	Cured
2	5 "	None	"	"	Yes		No benefit
3	5 "	1	"	"	None	"	Cured
4	13 "	1	Right.	"		"	
5	31 "	1	"	"	Yes	"	Working (CPk)
6	13 "	3	Left.	"	None	"	Cured
7	44 "	2	"	"		"	
8	58 "	1	Right	"	Yes	"	Died
9	19 "	1	"	"	None	"	"
10	24	3	"	"	Yes.	"	Some benefit
11	20	2	"	"	None	"	Cured
12	23	1	Left	"	"	"	
13	25 "	1	"	"	"	"	"
14	34 "	1	"	"	"	"	Died
15	23 Female	1	Right	"	"	"	Cured

Remarks—Drainage tube was used in all cases after excision of rib The average stay in hospital was 185 days

necessary to perform the operation of resection of one or more ribs subsequently, it is fair to suppose that the prior operation of tapping had failed to effect a cure Of the whole number operated on 9 were cured, 3 died and 2 only benefitted It will be observed that in all these 15 cases in which a portion of the rib was removed, drainage tubes were introduced, but in not one case in which tapping alone was practiced did the operator introduce a drainage tube, had this been done (which can always be easily effected by the use of a large trocar or enlarging with a bistoury, the opening made by the trocar), and the pleural cavity kept drained of its contents, the same favorable results would have followed and the more extensive and dangerous operation of resection been found unnecessary In children it is rarely we find more than a single cyst, and when diagnosed in the early stages, more frequently contain serum than pus, hence the facility with which cures may be effected in such cases, sometimes by one or two aspirations only, but more surely when the drainage tube is used, to avoid a reaccumulation of the fluid and allow a speedy expansion of the lung This, however, is not always the case, we sometimes meet with instances of pure purulent pleurisies in children where there has been no antecedent accumulation of serum or exudation of lymph upon the serous lining of the cavity, pus has been secreted from the very commencement of the attack and the cavity most usually in such cases found to be well filled It has not been found that these conditions are associated with tubercular contaminations, but in those who are free from such hereditary tendency In advocating the superiority of the trocar with drainage tube for the removal of these accumulations over the operation of resection of ribs, the following considerations present themselves to my mind as furnishing satisfactory reasons for such a preference

First, as above stated in children the fluid is most frequently found occupying a single sac or cyst being

of recent date The conditions found to exist in chronic cases, such as fibrous bands, pouches, sacs, forming numerous isolated cavities, inspissated pus, thickened pleuræ, etc , are absent The compressed lung tissue has not undergone any parenchymatous changes affecting its natural elasticity, the mechanical pressure of the fluid being removed it readily resumes its normal capacity The surfaces of the pleural cavity not having experienced those pathological changes usually found in chronic pyogenic membranes and the functions of absorption being more active in children, the partial removal of the contents of the sac by aspiration alone may give an increased impetus to that function and establish a cure by absorption

It may be that the stimulus of atmospheric air plays some part as a conservative agent in adding energy to this process Godlee, who it seems resorted to the operation of excision, in all of his cases, as reported in the table which I have quoted above, acknowledges in one of his papers that the operation of tapping children is often successful and recommends that in young subjects it should always be done at first and two or more tappings resorted to if necessary, before the graver operation of excision of rib be performed He, however, fails to advise what in my judgment constitutes almost a *sine qua non* to early success in all these cases of tapping, the additional use of drainage tube The objection which has been urged against this operation in children, namely, that the space between the ribs does not admit of using a trocar of sufficient calibre to accommodate a large sized tube and that it is almost impossible to keep the sinus or opening patulous for any length of time presents, to my mind, no significance, since the experience of those who practiced this operation through a long series of years, furnishes a positive contradiction to this criticism

Every surgeon knows that such a difficulty can always be overcome by enlarging the opening with a common bistoury In support of these views I here introduce the letter already referred to, of Dr Henry I Bowditch, of Boston, who has perhaps performed the operation of tapping the chest oftener than any other man now living He says

"For thirty-seven years I have been using the exploring trocar and suction pump in cases of pleuritic affection Sometimes repeatedly in the same person, and generally with success if the patient has been seen early enough Years since I began in several cases to make permanent openings by means of a large trocar and canula, the latter being left in the opening I have injected, at times, simple warm water (would it not be well under modern antiseptic ideas to use almost hot water?), I have injected repeated syringefuls *until the water was returned apparently free of pus*

"Generally, however, I have made no injection, if the patient with the free discharge has been improving

"Exsection of a rib I have never deemed necessary in childhood, nor in adults when the patient has been seen early enough to be able to try the above operations, one or both, without success I have advised it with advantage, in some cases, of adults Like everything else that is good in this world, it has been at times of late used most inappropriately and extravagantly as in one of my own cases, while the patient was traveling in Europe and with death as the result Nevertheless, I believe that used cautiously it will be of great advantage in certain chronic cases

"As I have never seen a case in childhood where I have felt called on to advise exsection, so I feel indisposed to advise it now, if any other course promises success

"I am sorry that I can not give you any more detailed statistics In a general way I will say that I made my last operation (399th), on my 256th patient, Aug 25, 1886 "

It will be observed that this experienced and eminent surgeon fully endorses the views which I have endeavored to present in this paper He says exsection of a rib I have never deemed necessary in children With a record of 390 operations, a large proportion of whom were children, his judgment on this point is not only entitled to our respect but should be regarded as conclusive Excision of a portion of one or more ribs for empyema as a substitute for, or supplementary to, the operation of tapping is a surgical procedure of comparatively modern date, although it has been claimed that it was first suggested, if not performed, by Celsus In this country I believe that Dr Warren Stone, of New Orleans, was the first to do the operation Estlander, of Helsingfors, seems to have directed more general attention to this practice and extolled its peculiar merits So far as I have been able to learn by reference to the recorded views of many distinguished surgeons of modern times, no distinction is made by them who advocate the operation of resection, between adults and children, perhaps, more frequently performed in cases of the latter than the former So far indeed as the statistics of hospital practice within the last decade show, the rule has been to operate by resection in all cases of children

As I have above stated in discussing the superior merits of tapping the conditions most usually met with in young children differ so materially from those encountered in the chronic cases of the pleuritis of adults, that I think age should be regarded as a factor of primary importance in determining the exact diagnosis as well as selecting the particular mode of surgical interference When we consider the fact that the bony fabric of the chest in the child is still in a condition of progressive physical development, the rapid and excessive deposit of callus following the solution of continuity of a rib, protruding into the cavity of the chest and irritating the lung, the inevitable deformity and loss of symmetry in expansion of the two sides of the thorax, which is apt to follow the removal of one or more ribs, the growing condition of the child which necessarily adapts itself to the physical results of the traumatic interference, establishing often a permanent deformity, associated at times with more or less spondylitis, and a greatly restricted respiratory capacity of the chest, the

pouch of periosteum from which the excised piece of rib has been dissected, the protracted healing and long continued dressing of the open wound, augmenting the chances of septicæmia and exhausting the vital energies and recuperative resources of the little sufferer We should hesitate before resorting to so grave a surgical procedure when a more simple and conservative one can be safely and successfully practiced

In presenting the above criticism upon the operation of resection or removal of one or more ribs for the cure of empyema it will be remembered that I have reference to the operation upon young children exclusively, having in view simply a desire to call attention to the importance of discriminating carefully in the surgical treatment of these cases between adults and children

Jacobi says "Excision of the ribs should never be practiced in children "

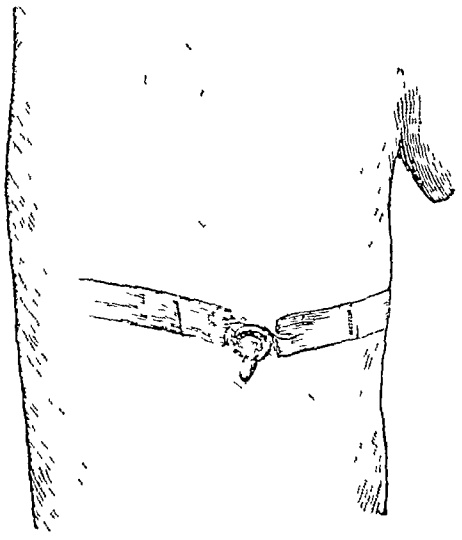
J Lewis Smith says "That he never could conscientiously recommend excision in any case in his practice, hospital or private "

T Clifford Albutt says "Resection of a portion of two or more ribs may be necessary in some cases, but such cases will become very rare as diagnosis and early operative relief are more generally understood " If I deemed it necessary I might add the testimony in support of my views upon this subject, of many other experienced and skilful surgeons The following brief notice and accompanying photograph of a case upon which I operated some three years ago will serve to illustrate the simple but effectual procedure advocated in such cases

This youth was sent to me from the country supposed to be far advanced in phthisis Had suffered for six months with symptoms of tubercular consumption including expectoration of large quantities of pus A careful physical examination revealed the presence of empyema of right chest, pleural cavity well filled with pus, and lung compressed against spinal column I decided to tap him at once with a medium sized trocar, which was done through the sixth intercostal space, and about 32 oz of pus drawn off The cavity was not washed out nor was a drainage tube inserted Great relief was afforded the boy and the cough almost entirely suspended

In three weeks the pleural sac had refilled entirely with pus, all of the distressing symptoms returned and the patient and friends despondent I now determined to repeat the operation of tapping with a large trocar, and introduced a soft rubber tube At this operation nearly the same amount of pus was drawn off and after the cavity had been washed out with tepid water the tube was inserted and kept in its place by the device represented in the picture A large piece of soft sponge moistened with carbolized water was placed so as to allow the end of the tube to rest on it and confined by a bandage, no antiseptics used

Each succeeding day the cavity was washed out with tepid water, at first nearly one quart being used In three weeks the cavity had so diminished by the expansion of the lung that but 1 oz of fluid could be thrown in, and at the expiration of four weeks the tube was removed and the sinus allowed to heal The patient continued to grow fat and strong and is now perfectly well In this connection I may refer to the mooted question of using injections after drawing off the contents of the cavity Many surgeons object to their use while others employ them Dr Cayly, of England, reports many cases of sudden death resulting from injections of simple water, solution of iodine and of carbolic acid In all of which death occurred after repeated injections had been used with apparent impunity As no explanation of the cause of death in such instances has been offered, and as the practice of using tepid water has been so generally and safely employed I can see no rational grounds for entertaining such apprehensions



UTERINE SUBINVOLUTION AND AREOLAR HYPERPLASIA

Read in the Section on Obstetrics and Diseases of Women, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

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Physiologically considered, the uterus is more subject to variations in size than any other organ of the human body "Its weight, but little more than one ounce in the virgin state, increases during pregnancy to upwards of two pounds After labor, in two days it falls to a pound and a half, during the first week to one pound The cell elements are consumed, compression of nutrient blood-vessels cuts off fresh supplies from the oxidized protoplasm, and in from six to eight weeks the uterus is reduced to almost its normal proportions " If this tearing down and carrying away, by nature's forces, that structure which enveloped the child and nourished it during the period of intra-uterine existence, stops short of completion, we have the condition known as subinvolution or arrested retrograde evolution

Pathological Anatomy—Edis says "In the early stages of subinvolution following parturition, hypertrophy of the muscular structure equally with that of the connective tissue may be found, but later on, in the large majority of cases, on microscopic examination, the amount of fibrous tissue predominates over the muscular fibre Within a few days after parturition, the fully developed muscular fibres undergo a fatty degeneration, the fatty globules being absorbed and the uterus thus rapidly diminishes in size and weight" Should any cause retard or check this process, the uterus will remain flabby and large Thomas says "At first the tissues are infiltrated with serum In process of time the uterine walls diminish in size, their tissues grow less vascular, the blood-vessels become smaller, and the uterine cavity assumes smaller dimensions, but the organ does not assume its original size It remains large, dense, firm and sensitive for years, presenting the characteristic appearance of the so called parenchymatous metritis Cases which were formerly regarded as examples of inflammation on account of the existence of enlargement, congestion, and tenderness upon pressure, the microscope now *proves* to have been instances of excessive growth of connective tissue of the uterus, with resulting hyperæsthesia of its nerves"[1]

Klob states that diffuse growth of connective tissue constitutes the so called induration hitherto considered as a result of parenchymatous inflammation of the uterus

Has every congested, voluminous, tender and displaced uterus once contained an embryo or fœtus? Let us reason, that for from 25 to 35 years, the virgin uterus is subject to monthly enlargement and shrinkage, differing little, except in degree, from what occurs in the multiparous organ The nervous system, especially the uterine plexus, is in a state of hyperæsthesia during menstruation, while the vascular supply, physiologically great, needs only to be disturbed by one or more causes, mental or physical, to produce blood stasis, followed by hypergenesis of connective tissue—precisely the pathological condition present in a vast majority of all chronic uterine disorders Menstrual subinvolution is, then, worthy of consideration in this connection

It has been shown that the position of the uterus varies widely within normal limits It should also be borne in mind that "nidation and denidation," together with the vascular changes constantly taking place in the uterine mucosa, make it clear that the uterus has no permanent size, enlargement and shrinkage being the law of its existence during menstrual life Hence there are many cases of so-called chronic inflammation not directly traceable to childbirth, and others in no way connected with it at all

I further quote Prof Byford "The circulation of the uterus is increased in quantity from the cessation of one flow till the beginning of the next During the days of the flow the afflux of blood subsides to the lowest amount From the cessation of the monthly flow there is an increase of solid tissue in the uterus until the beginning of the next flow, during which time there is involution, or an elimination of solid tissue, notably the mucous membrane of the cavity These processes of afflux of blood and *accessions of tissue may be and often are prolonged and pass into what is known* as *congestion* of the uterus" Again he says "In both menstrual and post-partum subinvolution this simple vascular condition does not continue for any great length of time Hyperæmia is often a *mischievous condition*, and sooner or later causes changes in the organization of the viscus in which it exists" In subinvolution there is at first hyperæmia with hypertrophy of the fibrous, vascular, and nervous tissues These solid portions of the organ degenerate, not into fatty substance that may be absorbed, but into fibrous tissue of a low organization Subinvolution is a term, then, which embraces different pathological conditions, or perhaps it would be expressing the facts better to say that several distinct pathological conditions of the uterus result from subinvolution This last statement will apply equally to menstrual and post partum subinvolution

Etiology—Emmet, in the second edition of his book, dismisses the subject of subinvolution with the statement that he has for many years found few or no cases of subinvolution not due to laceration of the cervix In the third edition, in speaking of "Lacerations and their Treatment," he says "A careful study of the history of the cases which have passed under my observation during the past five years, and have finally required operations, teaches, if anything, that a laceration of the cervix, however extensive, will rapidly heal without an untoward symptom unless blood poisoning should take place This occurrence is always accompanied by some general disturbance, and is marked by a septic cellulitis which obstructs the pelvic circulation so as to arrest involution and repair of injury" He then adds "If this is proven it becomes a question as to how far the necessity for a subsequent operation, to repair the injury, may be limited or rendered unnecessary by the early care of the obstetrician"

I have seen fit to place this quotation under the head of causation, that it may aid in determining the relation of cause and effect between the arrested involution and the laceration Emmet has given us the link, that was missing in his former editions, between the cause—laceration—and the effect—impaired health of the patient This missing link, this arrested involution, is a factor prominently presented by this great master as worthy of consideration in connection with the operation for closing a laceration In another place Emmet (2d ed) gives us to understand that subinvolution may have constitutional causes He says "We will find, as a rule, feeble respiration in both lungs, with an increase of secretion throughout the air passages, the condition being best fitted for the rapid development of tubercle" Again he says "This perverted state of the mucous membrane is, equal with subinvolution, an indication of some serious defect in nutrition" Low states of nutrition are among the predisposing causes, such as are found in prolonged nervous depression,

[1] Winckel's late work, by Prof Parvin, treats this subject under the head of Chronic Metritis

grief, worry, etc , among the exciting causes, partu rition oft repeated, opium to stop after-pains, which are but signals that nature is starting up healthy in volution, and expelling clots Further, opium hinders retrograde metamorphoses and lessens secretion Want of stimulation to contraction from nursing child, or still birth, to which latter may be added grief, or over exertion, or insufficient exercise following parturition, may be added The uterus should contract by a vital force, such force not being obtainable by inactivity

Torpid conditions of the liver and intestines, interfering with the return of blood from the pelvis through the portal veins, abdominal tumors pressing on the vena cava, septic instruments used by physicians, such as sound, etc , unskilful manipulation of same, displacements, and as Klob states, its cause must be sought for in habitual hyperæmia Emmet speaks of having found congestive hypertrophy of the uterus in ladies who have lived in malarious districts, especially the Southern States This enlargement remained as a sequel of repeated attacks of remittent fever The venous congestion of the pelvis and enlargement of the uterus were brought about after the muscles had lost their tone from the constant obstruction to the return of the circulation through the portal system

Parturition may act simply as a predisposing cause As Thomas states, a woman has a child, has no postpartum trouble and goes through involution perfectly A year or two later she has endometritis This in time produces areolar hyperplasia with its usual symptoms and physical signs, the same kind and degree of endometritis in a virgin would have lasted for years without parenchymatous complication In the former case the endometric disease existed on ground as favorable to hyperplasia because an important predisposing cause existed In the latter case such predisposition was wanting

To illustrate more clearly how causes other than parturition may produce hyperplasia, I will give two examples taken from observation

Case 1 —A lady with a perfectly healthy uterus being in great anxiety to prepare for a journey, neglected to evacuate the bowels for several days, puts on a tight corset dragged down by several heavy skirts, makes her journey, but before leaving the warm car does not empty the bladder, the excretion of urine is increased by the chilling carriage ride The distended bladder pushes the fundus of the uterus backwards The distended rectum pushes the cervix forwards, and, as she alights from the conveyance, the uterus turns backward into the hollow of the sacrum, its more complete impaction being insured by running up a flight of stairs or even high steps Menstruation, which was due at this time, is delayed She has pain, and becomes an invalid A year later she is found to have complete retroversion with areolar hyperplasia, innervation, circulation and nutrition of the uterus having been deranged by the displacement

Case 2 —A lady of feeble nutrition and circulation, by exposing and chilling the body near her menstrual period, has a leucorrhœal discharge which soon changes the normal chemical reaction of the cervical and vaginal secretions, the discharge becoming irritating, bathing the vaginal face of the cervix and denuding it of epithelium, and subsequently of mucous membrane The Nabothian glands become swollen, the cervix, internal and external, granular These raw surfaces admit of the absorption of septic material, which in time produces uterine and pelvic congestion Each recurring menstrual period leaves the uterus a little larger than before, until continued hyperæmia results in areolar hyperplasia with displacements, menstrual disorders and all the symptoms, subjective and objective, found in subinvolution

Diagnosis —This requires skilled efforts and great dexterity in conjoined manipulation The clinical history of no two cases will be the same The morbid phenomena are frequently referable to the origin of the disease The subjective symptoms will include dull, heavy, dragging pain through the pelvis, much increased by locomotion, dull pain beginning several days before menstruation and lasting during that process, pain in the breasts before and during menstruation, darkening of the areola of the breasts, nausea and vomiting, great nervous disturbance, pressure on the rectum with tenesmus and hemorrhoids, pressure on the bladder with vesical tenesmus, menstrual disorders and sterility

Physical Signs —If the disease be limited to the cervix, it will be found large, swollen and painful, the os patulous On conjoined manipulation the cervix is found to be unduly sensitive, especially if it be lifted up by the finger There is usually some leucorrhœa or granular degeneration present In the early stage of subinvolution there is softness of the tissues, which is less noticeable in the more advanced forms of hyperplasia Where the body of the uterus is involved, on conjoined manipulation the organ is found to be much enlarged, the thickness of the walls being greater than the increase in length The uterus is lower in the pelvis and less movable than normal, from its intrinsic bulk, and is more sensitive to pressure than in health The displaced uterus is often complicated with prolapsed and tender ovaries

From the foregoing symptoms it will be seen that it would be no easy task to differentiate between subinvolution and early pregnancy, especially if the patient be yet a nursing woman, and no evidence could be gained by a return of the menstrual flow The skilled hand ought to be able to detect the more globular shape of the uterus and the feeling of tension suggestive of a contained fluid Nausea, pressure on the neck of the bladder, irritation of the breasts, etc , are often as well marked in subinvolution as in pregnancy, and therefore aid little in differentiation Even a discharge of blood once a month may come from an abrasion on the neck of the uterus

As between beginning fibroid tumors the differentiation is extremely difficult, especially if they are the same, except that in fibroids we have a local, in subinvolution a diffuse hyperplasia of connective tissue

Prognosis — This will depend upon the general condition of the patient, what she will submit to, and

the extent of the replacement of normal muscular tissue by the abnormal connective tissue

Treatment—Keeping in mind the fact that this condition is not inflammatory, but one of debility, in the vast majority of cases, the importance of constitutional treatment is self-evident The most perfect state of secretion and excretion possible should be secured and maintained, to the end that the highest degree of assimilation and nutrition shall furnish plenty of blood, rich in red corpuscles, to aid in ridding the uterus of its redundant fibrous tissue The full, free expansion of the lungs by atmospheric pressure, uninterfered with by corsets or heavy skirts, is absolutely essential to keep the blood pure A sufficient amount of muscular movement is required to keep the blood in circulation through the capillaries, especially of the skin

If the patient cannot go out riding or walking each day, opening the windows and doors while the patient is warmly covered, as suggested by Prof Byford, will do much to maintain good respiration The preparations of iron, strychnine, ergot, quinine, etc, are of great benefit in most cases

Local Treatment—So high an authority as Emmet declares that he "has seen few cases of subinvolution not due to laceration of the cervix" Admitting the truth of this statement, the important question would be, What relation does the closure of a laceration bear to the cure of the patient? It must not be forgotten in this connection that we have precisely similar pathological conditions in uteri that have become normal in size after delivery and again enlarged from one or more causes which produce dilatation of the pelvic veins, and even in women who have not borne children at all, I often find it necessary to sew up a torn womb, even to cut away a considerable amount of tissue to get rid of the hyperplastic conditions and cicatrices At the same time, *let me insist*, the operation is but one of several factors in the cure, and that, as an etiological factor and therapeutic necessity, it has been over estimated and often abused

Emmet (3rd and last ed) says "The simple existence of a fissure in the cervix does not justify an operation for its closure Nor should the operation be ever resorted to except for the relief of symptoms which have remained after the accepted treatment has been employed without benefit" Again he says "The operation has been performed too often, when no necessity for doing it has existed It has been done quite as often without the proper preparatory treatment, even while more or less cellulitis existed, and still oftener with no clearly definite purpose in view The result has been frequent disappointment, and not seldom the patient has suffered a great impairment of health He also further states that it is necessary to give the preparatory treatment for the reduction of the *cellulitis* and the *rolling* in again of the tissues before it is safe to operate, and before we can even determine the need of performing it If the operation for closing the laceration is performed after the different sources of irritation have been removed, the uterus will be reduced rapidly in size, and the patient will not only regain her health, but remain in the full enjoyment of it afterwards"

From these sensible statements, coming from the originator of the operation, I infer that the pelvic congestion and subinvolution are to be removed, as far as may be, before we *are warranted in operating* Here again the pendulum of science, swung to extremes by a half mania for sudden cures, finds its equipoise on the *terra firma* of *sound surgical principles* Do the best we can, operate as *perfectly* as possible, and even then, in my experience, after treatment, by supports and dilating, is sometimes necessary If this be proven it explains why we see and hear of so many women who have derived little or no benefit from an operation which they were told would cure The wisdom we display in adapting our remedies, whether they be operations or drugs, to the particular stage of the disease, will determine the measure of our success When the uterus is much enlarged, intra-uterine medication, to act upon the excessive mucous membrane, will often do good, the cervix must be well dilated, so that if fluid is to be expelled it will escape through the cervix and not the Fallopian tube, the dilating doing as much good as the medication Churchill's tincture of iodine, nitrate of silver and hot antiseptic vaginal injections are precious remedies in pelvic diseases Let me insist, however, their use requires a wise discrimination

A slight subacute inflammation in the neighborhood of the uterus, involving possibly some of its ligaments, may cause a slight prolapse or displacement A prolapsed ovary, a diseased Fallopian tube, a painful urethral caruncle, or even a fissure in the rectum, may so constantly irritate the pelvic nerves as to disturb innervation and circulation and produce uterine and pelvic congestion, which nature nine times out of ten would attempt to relieve by discharge of blood from the uterine mucosa, or of mucus or pus from the Nabothian glands in the cervix These discharges being but the local expression of some morbid condition, their arrest by local applications is irrational True, the patient may feel better for a time, as arrested outflow increases pressure, disturbs nutrition and facilitates hypergenesis of connective tissue, with its scanty blood supply and few nerve filaments

Practitioners will never secure a few simple means of curing all the diseases found in such complicated structures as the human eye or woman's pelvis—remedies such as shall be universal in their application regardless of the intricacies of diagnosis Such local means as deplete the distended veins and swollen glands will do good Bennet's nitrate of silver being followed by a free discharge of blood on the second day, and stimulating uterine contraction, did good, he thought he cured ulceration and inflammation Simpson and Sims, splitting the cervix, drained out the enlarged veins, securing better uterine nutrition by local depletion The depletion attendant on an operation for closing a lacerated cervix is sometimes the measure of its benefit to the patient Hodge, with his pessary, corrected malposition, restored normal circulation to the pelvic organs, and cured many a sufferer Any displacement must be rectified in order to restore normal circulation, without which

normal innervation and nutrition are impossible For more than two years I have substituted tampons of wool for those of cotton, for the former, by elastic pressure, replace organs better, relieving pressure irritation, and removing many reflex phenomena, thus doing vast good by local *depletion* and local *compression* These should always be applied in a *definite* way and for a *definite* purpose, and if made antiseptic may remain for several days

Vaginal injections with a Hilderbrandt's douche, which enables a competent attendant to use water 10°–15° hotter than can be borne by the external parts, is of decided benefit Rapid, free and repeated dilatation with graduated steel sounds and dilators will, by pressure, excite absorption of the abnormal tissue not only of the cervix, but in the body of the uterus as well The antagonistic action or law of uterine fibre, as laid down by Savage that dilating the cervix causes contraction of the fundus, and *vice versa*, suggests that dilating is a valuable means The lesson learned by dilating hypertrophied anal sphincters can be utilized in treating uterine hyperplasia

The great sheet anchor is electricity The constant current, employing 12 to 30 cells, used every third or fourth day, I consider most valuable Mr Rietz, an eminent electrician of Indianapolis, asserts that no current is constant and steady unless the plates are constantly in the fluid The wonderful results being attained at the present time with electricity in treating fibroids, together with the similarity between hyperplasia and fibroids, lead me to think that electricity, used in the earlier stages of the former, would many times prevent the growth of the latter, and restore many enlarged, tender and displaced uteri to their normal conditions Removal of the ovaries for the cure of subinvolution has been suggested It was not my purpose, however, to speak of the surgical treatment of subinvolution, so much as to call attention to importance of obviating the necessity for surgical operations by removing those morbid pelvic conditions which tend to make such operations necessary

Conclusions —From the foregoing statements bearing on menstrual and post partum subinvolution, I feel warranted in submitting the following questions for discussion

1 Where does subinvolution end, or areolar hyperplasia become sufficiently circumscribed to receive the name interstitial fibroid?

2 Are not all varieties of fibroid tumors but localized conditions of more diffuse areolar hyperplasia?

3 Do not microscopists agree that the areolar hyperplasia of arrested involution and fibroid tumors both originate in uterine hyperæmia?

4 If this be true, does it not suggest that greater efforts to prevent uterine hyperæmia from resulting in hyperplasia, would also lessen the frequency of fibroid tumors?

5 Is not chronic areolar hyperplasia at the foundation of a large number of cases of diseased and displaced uteri and ovaries, and will not any means, medical or surgical, looking to a cure, which does not remove this abnormal tissue, fall short of the desired result?

6 Despite recent advances in gynecic surgery, is not blood, deficient in quantity and quality, as important a *primary* factor in the causation of uterine disease as when Holy Writ first declared, "The blood is the life thereof?"

7 So many new things are becoming old, I present this paper to aid some old things in becoming new, and for the purpose of calling attention to a few points in uterine pathology and therapeutics which, if less frequently forgotten by the average practitioner, would render operations for lacerations, diseased ovaries and other pelvic diseases much less frequent, and of more benefit to women when performed

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THE CHEMISTRY OF TYROTOXICON

Its Action upon Lower Animals, and its Relation to the Summer Diarrhœas of Infancy

Read in the Section on State Medicine, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY VICTOR C VAUGHAN, M D, Ph D,

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Since making my report on the investigations concerning the nature of tyrotoxicon, (report of *Proceedings of the Michigan State Board of Health*, October, 1886), I have continued my work, aided greatly by Messrs F G Novy and E V Riker We soon ascertained that if some butyric acid ferment be prepared as is ordinarily done in the preparation of butyric acid, and some of this be added to normal milk, and the whole be kept in closely stoppered bottles for eight or ten days, the poison will be developed in the milk in considerable quantity The milk should be filtered, the filtrate neutralized with sodium carbonate, and then extracted with ether

Having a strong solution of the poison in absolute alcohol, which had been obtained from milk inoculated as stated above, I added to it some platinum chloride and began to evaporate on the water bath As soon as the alcohol evaporated the residue exploded with great violence The vessel, a glass evaporating dish, was broken into fine fragments and these were scattered over the room, while the gas-light under the water bath was extinguished The experiment was repeated a number of times with like results From some of this alcoholic solution the platinum was removed with hydrogen sulphide gas, but the filtrate was then found to have lost its explosive property This reminded us that diazobenzol compounds form with platinum chloride a highly explosive compound, and that diazobenzol is also decomposed by hydrogen sulphide Some diazobenzol nitrate was prepared according to the method of Griess,[1] and comparisons made between this and tyrotoxicon With equal parts of sulphuric acid and carbolic acid the prepared diazobenzol

[1] Annalen der Chemie und Pharmacie B 137, S 39.

nitrate gave a green coloration, while with the same reagents, tyrotoxicon gave a color which varied from a yellow to an orange-red But the diazobenzol nitrate dissolved in the whey of normal milk, and extracted with ether or in the presence of other proteids, gave the same shades of color as the tyrotoxicon did, and the potassium compound of tyrotoxicon prepared by the method to be given later produced the same shade of green as did the artificial diazobenzol This color test may be used as a preliminary test in examining milk for tyrotoxicon It is best carried out as follows Place on a clean porcelain surface two or three drops each of pure sulphuric acid and pure carbolic acid This mixture should remain colorless or nearly so Then add a few drops of the aqueous solution of the residue left after the spontaneous evaporation of the ether If tyrotoxicon be present a yellow to an orange-red will be produced This test is to be regarded as only a preliminary one, for it may be due to the presence of a nitrate or nitrite [2] The tyrotoxicon must be purified according to a method to be given further on before the absence of nitrate or nitrite can be positively demonstrated

In the filtrate from milk which is rich in tyrotoxicon, after neutralization with sodium carbonate, filtration and acidifying with hydrochloric acid, gold chloride produces a precipitate, which is insoluble in water, but soluble in hot alcohol, from which it separates on cooling in golden plates Diazobenzol compounds give with gold chloride a precipitate having all these properties In both cases the gold compound is decomposed by frequent treatment with hot alcohol, and this fact prevented any satisfactory ultimate analysis of this salt It should be remarked here that from some samples of milk this gold salt is obtained much more easily than from others, and the difference is dependent not so much upon the amount of tyrotoxicon present, as upon the condition of the other organic matter present It is best obtained from samples which have stood in well stoppered bottles for a month or longer Tyrotoxicon obtained from milk was treated according to the method recommended by Griess[3] for the preparation of diazobenzol potassium hydrate, and the per cent of potassium in the compound obtained was determined The filtrate from the milk which had been inoculated with the ferment and kept in a stoppered bottle in a warm room for 10 days, was neutralized with sodium carbonate, agitated with an equal volume of absolute ether, allowed to stand in a stoppered flask for 24 hours, the ether removed and allowed to evaporate from and open dish The aqueous residue was acidified with nitric acid, then treated with an equal volume of a saturated solution of potassium hydrate and the whole concentrated on the water bath On being heated the mixture became yellowish brown, and omitted a peculiar aromatic odor Both the color and odor corresponded exactly with the color and odor produced by carrying some of the artificial diazobenzol through a comparative test On cooling, the mass crystalized, the resulting compound appearing in the test with the tyrotoxicon, and in the comparative test also, in beautiful, six sided plates, along with the prisms of potassium nitrate The crystalline mass obtained from the tyrotoxicon was treated with absolute alcohol, filtered, the filtrate evaporated on the water-bath, the residue dissolved in absolute alcohol, from which it was precipitated in a white crystalline form with ether The precipitate was collected, washed with ether, dried, and the per cent of potassium estimated as potassium sulphate 2045 gram of the substance yielded 109 gram of potassium sulphate Per cent of potassium calculated, in $C_6H_5N_2OK$ 24 42, found, 23 92 This analysis establishes the identity of tyrotoxicon and diazobenzol Chemists will now appreciate the great difficulty that has been experienced in isolating the active agent of poisonous cheese

The readiness with which diazobenzol decomposes is well known When warmed with water it breaks up into carbolic acid and nitrogen Hydrogen sulphide decomposes it, therefore, all attempts to obtain the poison by precipitating it with some base, such as mercury or lead, and then removing the base with hydrogen sulphide, have failed Moreover, diazobenzol is only a transition product of putrefaction I have frequently found that leaving some milk rich in the poison in an open beaker for 24 hours would be sufficient to destroy the whole of the poison We know nothing positively concerning the acid with which diazobenzol is combined in the milk or cheese We prepared some diazobenzol butyrate, $C_6H_5N_2C_4H_7O_2$, and ascertained that the crystals of this compound correspond with those of tyrotoxicon, and that they decompose in moist air with the same rapidity This is the first time that diazobenzol has been found as a product of putrefaction, and it is possible that many of its allied compounds may be formed in the same way

The following experiments will show that the effects of tyrotoxicon and diazobenzol upon the lower animals are identical

Experiment 1 —From one half gallon of some milk, which had stood in a tightly stoppered bottle for three months, there was obtained quite a concentrated aqueous solution of the poison after the spontaneous evaporation of the ether Ten drops of this placed in the mouth of a small dog 3 weeks old caused within a few minutes frothing at the mouth, retching, the vomiting of frothy fluid, rapid breathing, muscular spasm over the abdomen, and after some time watery stools The next day the dog seemed to have recovered partially, but was unable to retain any food This condition continuing for two days, the animal was killed with chloroform No examination of the stomach was made

Experiment 2 —Tyrotoxicon obtained from poisonous ice-cream was given to a cat Within ten minutes, the cat began to retch and soon it vomited The retching and vomiting continued for 2 hours during which time the animal was under observation, and the next morning it was observed that the cat had passed several watery stools After this,

[2] The coloration with nitrates and nitrites is darker than with diazobenzol but before positive conclusions are arrived at other tests must be made

[3] Annalen der Chemie und Pharmacie, B 137, S 54

although the cat could walk about the room, it was unable to retain any food Several times it was seen to lap a little milk, but on doing so it would immediately begin to retch and vomit This condition continuing, after three days the animal was placed under ether, and its abdominal organs examined We certainly expected to find marked inflammation of the stomach, but we really did find the stomach and small intestines filled with a frothy serous fluid, such as had formed the vomited matter, and the mucous membrane very white and soft There was not the slightest redness anywhere along the alimentary canal

Experiment 3 —Some tyrotoxicon obtained from milk which had been inoculated with poisonous cream and allowed to stand for 48 hours was administered to a large old cat It soon produced retching, but no vomiting or diarrhœa The amount of the poison administered in this case was small

Experiment 4 —Some tyrotoxicon from milk was given to a young, but full grown cat Within 15 minutes there was marked and evidently painful retching, and within half an hour vomiting accompanied by rapid breathing Later there were several stools, the first two of which contained fæcal matter, but the subsequent ones were rice-water like and wholly free from fæcal odor After two days some more of the poison was given, and the vomiting and diarrhœa again induced The animal was then anæsthetized, and examination of the stomach and intestine showed the mucous membrane blanched as in experiment 2

We have the records of a number of other experiments with tyrotoxicon on the lower animals, but as the symptoms induced in all were substantially the same, it is unnecessary to note them here We will now give the effects observed in the lower animals after the use of the prepared diazobenzol

Experiment 5 —Gave to a large old cat, 100 milligrams of diazobenzol butyrate Immediately the animal began to purge Then she lay upon the floor breathing rapidly and retching severely for two hours, when she died The retching was most violent, but vomiting seemed impossible Post mortem examination showed the lungs greatly congested, but the mucous membrane of the stomach and intestine was not reddened The stomach contained some food I suppose that the congestion of the lungs was due to the violent retching

Experiment 6 —To a young but full grown Maltese cat, I gave 100 milligrams of diazobenzol butyrate With most violent retching, but without either vomiting or stool, the animal died within 30 minutes after the administration of the poison The lungs were found acutely congested, and the stomach free from any redness The circular fibres of the small intestine were tightly contracted

Experiment 7 —Gave to a full grown cat 25 milligrams of diazobenzol butyrate Within 10 minutes vomiting and purging were induced The first stools contained fæcal matter, but the subsequent ones were like rice-water, and wholly free from fæcal odor After two days the cat was able to take food, then 10 milligrams more of the poison was given, with the reproduction of the vomiting and purging The animal then rapidly emaciated, and after a few days, it was anæsthetized and the mucous membrane of the stomach and intestine found blanched The lungs were not congested

Experiment 8 —10 milligrams of the poison produced diarrhœa and continued vomiting in a cat

Experiment 9 —75 milligrams produced vomiting and diarrhœa with congestion of the lungs in a dog

It seems unnecessary to detail any more of these experiments, as the identity of tyrotoxicon with diazobenzol is now established, not only by chemical analysis, but this proof is strengthened, if chemical analysis can be strengthened, by the action of the poison on the lower animals and by post mortem appearance

I think it highly probable that diazobenzol or some closely allied substance will be found in all those foods, which from putrefactive changes produce nausea, vomiting and diarrhœa In some oysters, which produced these symptoms, I have recently found tyrotoxicon

Milk or other fluid to be tested for this poison should be kept in well stoppered bottles, for if the fluid be exposed to the air, the tyrotoxicon may decompose in a few hours The filtrate from the milk or the filtered aqueous extract of cheese should be neutralized with sodium carbonate, then shaken with half its volume of pure ether Time should be given for the complete separation of the ether Purified tyrotoxicon is insoluble in ether, and it probably owes its solubility in ether at this stage to the presence of impurities After complete separation the ether should be removed with a pipette and allowed to evaporate spontaneously from an open dish The residue from the ether may be dissolved in distilled water and again extracted with ether, but repeated extractions with ether are to be avoided, for as the tyrotoxicon becomes purified, it becomes less soluble in ether To a drop of an aqueous solution of the ether residue apply the preliminary test with sulphuric and carbolic acids To the remainder of the aqueous solution of the ether residue add an equal volume of a saturated solution of caustic potash, and evaporate the mixture on the water-bath The double hydrate of potassium and diazobenzol will be formed if tyrotoxicon be present, and this may be recognized by its properties and reactions which have already been described

The above mentioned experiments upon the cats and dogs strengthen us in the belief that the development of this poison in milk is a frequent cause of cholera infantum and kindred affections When we remember that these diseases are most prevalent among the poor classes of our large cities, where fresh milk is almost unknown, we can readily understand their frequency By such people milk is often not obtained until it has begun to sour, then it is kept at a high temperature and often in a most foul atmosphere and we all know something of the readiness with which milk takes up bad odors This milk is then eaten by the little ones who are weakened by poverty and everything that poverty means, insufficient food generally, and that of the poorest

quality, insufficient clothing, insufficient and vitiated air With these facts before us it is not surprising that in all our large cities thousands of children die annually from the summer diarrhœas Moreover, in our country places, how little attention is given to the food of children, we all know from actual observation Cows stand and are milked in filthy barns and yards The udders are generally, so far as my observation goes, not washed before the milking, the vessels for the milk are frequently found not as clean as they should be Then there are the thousands of children that must draw their sustenence from bottles, the cleansing of which is in many families not properly attended to Crusts of decomposing milk form around the neck of the bottle, in the tube and nipple, lead to the rapid decomposition of the entire contents of the bottle I think that one of the most important advantages to be secured to breast-fed children arises from the lessened danger of infection of the milk with germ which may produce poisonous ptomaines

I would not claim that decomposed milk is the sole cause of the summer diarrhœas of children, nor would I claim that tyrotoxicon is the only poison that may be developed in milk It is *only one of a large class of bodies which are produced* by putrefaction, and many of these are cathartic in action

But will this knowledge concerning the development of poisons in milk and other foods aid us in the prevention and treatment of these diseases?

Preventive measures will consist for the most part in attention to the diet, and especially in milk I have drawn up the following rules concerning the care of milk

1 The cows should be healthy, and the milk of any animal which seems indisposed should not be mixed with that from the perfectly healthy animals

2 Cows must not be fed upon swill, or the refuse of breweries, or glucose factories, or any other fermented food

3 Cows must not be allowed to drink stagnant water, but must have free access to pure, fresh water

4 Cows must not be heated or worried before being milked

5 The pasture must be free from noxious weeds, and the barn and yard must be kept clean

6 The udders should be washed, if at all dirty, before the milking

7 The milk must be at once thoroughly cooled This is best done by placing the milk can in a tank of cold spring water or ice-water, the water being of the same depth as the milk in the can It would be well if the water in the tank could be kept flowing, indeed, this will be necessary unless ice-water is used The tank should be thoroughly cleaned every day to prevent bad odors The can should remain uncovered during the cooling, and the milk should be gently stirred The temperature should be reduced to 60° F within an hour The can should remain in the cold water until ready for delivery

8 In summer, when ready for delivery, the top should be placed on the can, and a cloth wet in cold water should be spread over the can, or refrigerator cans may be used At no season should the milk be frozen, but no buyer should receive milk which has a temperature higher than 65° F

9 After the milk has been received by the consumer, it should be kept in a perfectly clean place, free from dust, at a temperature not exceeding 60° F Milk should not be allowed to stand uncovered, even for a short time, in sleeping or living rooms In many of the better houses in the country and village, and occasionally in the cities, the drain from the refrigerator leads into a cesspool or kitchen drain This is highly dangerous, there should be no connection between the refrigerator and any receptacle of filth

10 The only vessels in which milk should be kept are tin, glass or porcelain After using the vessel it should be scalded, and then, if possible, exposed to the air

With the attention demanded by these rules given to milk, it will become more valuable as a food, and the development of poisons in it before its introduction into the body will certainly be prevented

But in the prevention of the summer diarrhœas, attention to the food must not stop with its introduction into the body The ferment which produces tyrotoxicon is widely distributed, and it only awaits conditions suitable for its development We do not know exactly what germ it is that produces this poison, but it is either the butyric acid ferment or some ferment which is frequently developed along with the bacillus butyricus, because I have found that if some butyric acid ferment be prepared according to the method usually followed in making butyric acid, and milk be inoculated with this and allowed to stand at the temperature of the body for a few hours, or at the ordinary temperature of the room for several days, the poison will appear Moreover, as is well known, the bacillus butyricus grows best in the absence of air, we have already seen that the exclusion of air favors the development of tyrotoxicon We are aware of the fact that the butyric acid ferment frequently does develop in the stomach Therefore, I think that the prevention of these diseases necessitates some attention to digestion If the food lies in the stomach or intestine undigested, putrefactive changes will occur there

During the hot months, children, which are allowed to take food at will, often drink large quantities of milk simply for the purpose of quenching thirst Especially is this true when the patient forgets that a child would sometimes relish a drink of good water I feel that this overloading the stomach with milk caused by thirst often is of no little detriment It is hardly necessary to specify in regard to other ways in which attention should be given to the digestive organs of children Those that partake of other foods with their milk should be allowed only the most wholesome articles, and these should be in perfect condition Moreover, the depressing effects of extreme heat on the nervous system and its consequent injury to digestion should always be borne in mind

Now, we come to the discussion of the curative treatment of these diseases The first thing to do is

to stop the administering of milk in any form The ferment is present in the alimentary canal, and giving the best of milk would simply be supplying the germ with material for the manufacture of the poison This no milk treatment is not by any means a new idea It has been taught for some years by a few of the best authorities, but it has not been sufficiently insisted upon Moreover, the reason for it has not been hitherto understood It was believed in somewhat of a vague way that the digestive organs lose their capability of digesting milk, and experience showed that the exclusion of milk led to improved results But now that we know that a powerful poison is formed from the putrefaction of the milk, the necessity of its exclusion must become apparent to all I reported last year a case which is so applicable here that I must be pardoned for quoting it in full If the child had been an animal upon which I wished to experiment I could hardly have selected conditions more favorable

"July 30, 1886, about 1 o'clock P M , I was called to see the seven months' old babe of Mr B I found that the child had been vomiting quite constantly for some three hours It had also passed watery stools some six or seven times The eyes were sunken, skin cold and clammy, and pulse rapid and small I diagnosticated cholera infantum During the preceding night the child had seemed as well as usual, and had taken nourishment freely from the mother's breast Early in the morning it had been given a bottle of cow's milk, and soon thereafter the nausea and vomiting began Later, as stated above, the child began to purge The mother, furnishing an insufficient supply of milk, it had been the habit to give the child cow's milk several times through the day I prohibited the further use of milk, both that from the mother and from the bottle, and substituted meat preparations and rice water as food I also prescribed pepsin, bismuth subnitrate, chalk mixture, and camphoreted tincture of opium

"The cow's milk which had been furnished the child was from an animal kept by one of the neighbors On the evening of the same day that the child was taken sick I obtained two quarts of the morning's milk of this animal The milk had the appearance of very rich cream, being of a yellow tint throughout This milk was allowed to stand through the night of the 30th in the ice-box of a refrigerator On the morning of the 31st I began the analysis After pouring the milk from the pitcher there remained in that vessel about two ounces of a fluid the color of port wine Microscopical examination of this fluid showed the presence of pus and blood corpuscles The blood was also detected by obtaining the characteristic bands of oxyhæmoglobine with the spectroscope The milk, which had already coagulated, was filtered The strongly acid filtrate was rendered feebly alkaline with potassium hydrate and then agitated with absolute ether After separation the ether was removed with a pipette and allowed to evaporate spontaneously This residue was dissolved in distilled water and again agitated with ether This ethereal solution left, after spontaneous combustion, a residue which had a slightly brownish tint I did not obtain the crystals of tyrotoxicon, doubtless owing to this trace of impurity, but the residue had the color and taste of tyrotoxicon This residue dissolved in some distilled water and given to a cat produced retching and vomiting

"That tyrotoxicon was present in the milk taken by the child shortly before the beginning of its illness there could now be no doubt It is true that the milk was abnormal in other respects also, inasmuch as it contained pus and blood

"After the withdrawal of all milk and the use of the medicinal agents mentioned above, the child began to improve, and by the afternoon of August 1 it seemed so well that it was allowed a bottle of cow's milk (from another animal), but soon after taking this milk it began to vomit and purge Milk was again withheld and the same medicinal treatment resorted to This attack was slight, and after it the child continued to improve until the night of August 4, when the grandmother, 'who knew more about raising babies than the doctor,' fed the child bountifully upon milk Again the vomiting and purging began, and it was more than a week before all symptoms of gastro intestinal irritation had disappeared About the 15th of August milk was again allowed, at first in small quantity, and this seeming to have no harmful effect, more liberal quantities were given The child has continued well since "

That my experience in this is not unique will be made evident by the following quotation from a recent paper by Dr L Emmet Holt, physician to the New York Infant Asylum, who writes as follows "In children under two years of age not fed at the breast, it is better to withhold milk entirely This has been a subject of careful investigation during the past summer at the New York Infant Asylum, and both the resident physicians and myself have had this proved to our satisfaction by a large number of cases Peptonized milk is very much less likely to disagree than either condensed milk or fresh cow's milk But in many, even this caused an aggravation in the intestinal symptoms, particularly in severe and protracted cases Again and again have I seen relapses brought on when milk was added to the diet in cases where the stool had been practically normal for two or three days "

The food used may consist of chicken and mutton broths, beef juice, and rice or barley water With this list, no difficulty will be experienced in giving the child sufficient nourishment In the medicinal treatment the first thing to do is to cleanse the alimentary tract as thoroughly as possible In the first stages of the disease there is no better agent for this purpose than castor oil But if there have already been several serous discharges, copious enemata of water will be more suitable These injections may contain either an astringent or a disinfectant, or both For the latter, Holt recommends benzoate or salicylate of sodium, and for the former, nitrate of silver or tannic acid

The next thing to be done is to arrest the growth of the germ This germ has been found so far to develop only in acid media Therefore, I think it wise to administer some antacid Probably there is

nothing better in this line than the old chalk mixture In the preparation of the chalk mixture, the druggist should be requested to use glycerine, as many druggists still use syrup in this preparation The presence of the sugar leads to rapid decomposition during hot weather It has been said that the use of the antacid is irrational, because the discharges are often alkaline Of course, the serous discharges are often alkaline, because they consist of blood serum, and will be alkaline unless they have remained in the intestine long enough to ferment, but the reaction of such discharges does not prove that the contents of the stomach and small intestines are alkaline

As to the use of germicides, doubtless much is yet to be learned No doubt the chief effect of subnitrate of bismuth in this disease has been due to its effect upon the germ Holt makes an excellent showing for the salicylate of sodium, but since he has been using this drug, he has followed the no-milk diet and doubtlessly his lessened mortality has been due to the exclusion of milk quite as much as to the salicylate He uses this drug in doses of from one to three grains every two hours

I am now making some experiments with the object of ascertaining the effect of certain germicides on the development of this poison The results, I will give in some future paper, but I may state here what my success has been in a few experiments with mercuric chloride The method of conducting the experiment was as follows Four-ounce bottles were filled with milk, milk and ferment, and milk and ferment with mercuric chloride, closed with glass stoppers and kept in an air-bath at the temperature of the body for six hours Then the milk was tested for tyrotoxicon with the following results

No 1 Bottle containing pure milk only Result, no poison

No 2 Bottle containing pure milk only Result, no poison

No 3 Bottle containing milk and ferment Result, the poison present

No 4 Bottle containing milk and ferment Result, the poison present

No 5 Bottle containing milk, ferment and a one-hundredth grain mercuric chloride Result, poison present

No 6 Bottle containing milk, ferment, and one fiftieth grain mercuric chloride Result, poison present

DISCUSSION

DR J M AILEN, of Liberty, Mo, said that there was no evidence of inflammation after the diarrhœa from tyrotoxicon This is rare, for inflammation generally exists Milk alone is not the cause of summer complaint in children In the country not only is good milk obtained but, moreover, most country children are nursed by the mother Reflex irritation should be borne in mind as a cause Very rapid changes are going on in the gastro-intestinal canal of the growing child and we have excitability *plus* reflex action There is first arrested digestion in the stomach The secretion of the stomach is first interfered with, followed by fermentation of the food, by hyperæmia, and a state of inflammation He directed his attention to controlling reflex irritation and to the food

DR VAUGHAN said I doubt that there is active congestion in severe cases of cholera infantum The mucous membrane is bleached and whitened Tyrotoxicon acts by increasing reflex excitability, and not so much by irritation

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DIARRHŒA INFANTUM AND ALLIED DISORDERS

Read in Section on Diseases of Children, at the Thirty Eighth Annual Meeting of the American Medical Association

BY GEO WHEELER JONES, M D,
OF DANVILLE ILL

At the close of the last meeting of the Association, held in St Louis, I promised Dr Miller, the Chairman-elect of this Section, to write a short paper on this subject, which had been pressing itself upon my mind for several years, and with growing force since the discussion in the Academy of Medicine, of Paris, of Gautier's paper on the result of the very important—not to say startling—investigations of Selmi in 1877, including much original matter as presented by himself Continued researches in this direction have only confirmed the principles enunciated by earlier workers The discovery of tyrotoxicon by Prof Vaughan, with the increasing number of suggestive cases and reports, seemed to me to justify the contribution I proposed to offer to this Section Since commencing the preparation of this paper Dr Emmet Holt has given us a valuable article on the same subject published in the New York *Medical Journal* of the current year

It is now more than a quarter of a century since I sat at the feet of our professional Gamaliel and listened to his views upon the causes of summer disorders in children Ptomaines and leucomaines were the undiscovered quantities, but the environment necessary for their suitable abode, and the circumstances necessary for their full development will never be more clearly described than I have heard in words from the lips of Prof N S Davis, while the treatment instituted to control the diseases pointed—as we now see—unerringly toward the discoveries and advancements of the near future, although the conservatism of his own mode of thought may have prevented him from fully consenting to much that the modern enthusiast claims as undoubted fact and axiomatic principle Under the teachings referred to I had grown to a full realization of the importance of heat as a factor in the production of intestinal disorders, but in the care of a regiment during the war—in an active service from the Mississippi to the Atlantic seaboard I learned rapidly to know that heat was only *one* of the elements to be combatted The commands of which I had charge were rather exceptional in healthfulness and a recent review of the prescriptions and advice which it was my custom to give show that I was unconsciously aiming my medical guns at micro-organisms in the use of germicides rather than at the patient in the use of opiates and astringents I merely mention this as a suggestion, for the principles involved are the same be the children 30 days or 30 years old

Entering upon an active practice at the close of the war, I early became dissatisfied with the routine treatment of summer disorders in children, losing important cases during successive years and upon the promulgation of the germ theory of disease, I eagerly investigated the same, accepted it as a probably satisfactory solution of the difficulties in the way of greater triumphs in the saving of our babies' lives Treatment based upon such acceptance proved wonderfully successful, as recorded in a paper which I read before the Illinois State Medical Society several years since Every season and every new case has only confirmed me in the correctness of the position now taken by many of our best investigators until it might almost be laid aside with the remark "it goes without saying," but for the other fact that only the few have a full realization of these things, and settled truths are only rendered potent in a large way by persistent reiteration, and a presentation from standpoints as varied as are the characteristics of human observers

Whether putrescence has its origin in hydrolytic action with the necessary agitation to the elective affinities, or in the deoxydizing power of micro-organisms the result is the same—and in the light of recent investigations we must look to these results for much that is the cause of disordered vital actions in the various derangements of the intestinal canal Older men, imbued with the earlier teachings, especially those who grasped at chemical action as the solution of the problems of biological research will long hesitate to adopt the lines of thought which lean towards the former view, only the most painstaking exactitude and the most positive proof from the thoroughly informed bacteriologist will be convincing, and even then the verdict may be the Scotch one with a truce to theory while practice shall follow the lead of the other side For my own part I am fully impressed with the capability of the micro organic theory of certain diseases to satisfactorily account for more of their peculiarities than any other view that has thus far been advanced, and in a successful combat with the diseases considered in this paper, I believe there will be found no more efficient means than such as will develop from a thorough knowledge of all those conditions which make toward the possibilities of micro organic development And for this very reason the recent review of the whole subject as necessitated by the presentation of Gautier's views before the Académie de Médecine has been productive of the most positive advance as yet made toward a fuller and more satisfactory consideration of the subject of bacteriology in its relation to doctors and disease

All putrefaction—all fermentation—is an accompaniment, if not a consequence of cell action and cell formation, *i e*, of cell life, the various processes having each its respective form of cell and cell growth as the basis of its incubation and continuance Whether the newly discovered factors in disease—the ptomaine products—are a result of cell disintegration is a sharply defined field for future research, that it may be the latter and that the term cadaver alkaloids bears a doubly potent significance there are many reasons for believing The action of one of these alkaloids within the system is prompt, and unvarying, awaiting no slow process of incubation and maturity Tyrotoxicon produces in a few moments all the most virulent symptoms of cholera infantum or milk poisoning, while an alkaloid from the culture fluid of the comma bacillus gives origin at once to typical Asiatic cholera, so far as the morbid phenomena can determine

And just here I will throw out the suggestion as to whether inoculation with, or ingestion of high attenuations of some special alkaloid might not prove a valuable prophylactic in the management of some one or more of the dreadful diseases to which it bears an apparent causative relation, this suggestion of course being founded upon a consideration of the processes promulgated by Jenner and Pasteur, the half-acknowledged success of Ferran in Spain seeming to point towards such a possibility All waste products, as is well known, may be poisonous—probably are under certain conditions of heat, moisture and organic life The idea of life is inconsistent without its accompanying thought of waste, be that life the micro or the mammal, and in that waste, be it from the vital activities of bone, muscle, nerve, or the active vitality of micro organisms within the body, there exists destructive potentialities against which the skill of man was naught until the present generation The life history of many of the ferments is only superficially known and the results of their existence obscure and intangible, but with some we are becoming quite well acquainted, and our near approach, we trust, will rob them of many terrors to our race

A localized epidemic consisting of frightful morbid phenomena raises at once the question as to the domestic supplies, food, drink, air, clothing, by some one of which—closely questioned in turn—the sources of the trouble are revealed, may be corrected and the further spread of danger thus averted, no appeal to incantations, no guess work, no supineness, the foe is being sought for in his abiding place and destroyed

There are many changes, structural and nervous, in food poisonings which are not accounted for upon the simple germ theories but which may be fully explained by referring their causes to the action of the cadaveric alkaloids in part or *in extenso* Many of these products have the physical organization and the special physiological action of the various vegetable alkaloids as strychnine, narceine, conine, etc, and in their toxic action will develop structural tissue changes which it is important to consider in arranging for the proper application of suitable remedies In an extensive burn we have the fire to remove, the pain and shock to overcome, and the destroyed tissue to cleanse and restore—three distinct stages and modes of action, each calling for its special line of care A return to this thought will occur in its proper place, when we are considering the question of treatment

As ptomaines may be elaborated wherever organized ferments flourish, and as they represent the chief toxic principles of decomposing albumenoids, said decomposition resulting from the action of cell life, which action tends normally to constantly reproduce

itself so long as proper material is obtained, and thus continue the morbid processes once set in motion, and as many of the ptomaines in the waste of various diseases, producing by their continued formation a continuation of the morbid condition in which they are found, it really seems to me that their relationship to disease *must* be considered in all cases in which said disease is caused by or associated with micro-organic life

Without entering into an elaboration of this branch of my subject which you will find has been accomplished by several far more capable and better prepared investigators, I shall proceed to offer to you some practical points for the general worker in medicine I believe that the true solution of the difficulties in the way of the practical physician will be obtained by a union of the two theories which, when first presented in antagonism by M Gautier, seemed to be utterly irreconcilable Remembering the suggestions—as the existing knowledge was rapidly reviewed, that the alkaloid depends upon cell decomposition for its own possibility, and that no germ life can exist without death and decay—you have the key to the thought to which I desire to direct your minds

Under ordinary circumstances the digestive organs are capable of overcoming a certain amount of fermentative change which may have taken place in the food ingested, in fact many an adult stomach seems to prefer a tainted meat to one too fresh, but I believe this arises largely from force of habit and from the fact that in most if not all such cases we find the germ destroyed and further change prevented in that direction by the indulgence in copious potations of strong alcoholic liquids than which there are few better germicides The processes of digestion also tend to destroy germ life, except in those instances in which the cell has a special adaptation to intestinal abode The liver products are powerful anti-ferments in a normal condition, and one of the most favorable symptoms in the treatment of the troubles under consideration is a copious discharge of bile into the intestinal canal, giving an almost invariable relief to all serious indications While emptying an engorged liver may have the effect of relieving a local complication, I believe its greater influence is manifest in a disinfection of the gut and a consequent suppression of the causes of further infection

In children the tissues are less able to resist the attack of morbific agents and nature makes an effort at compensation by making their livers much larger in proportion than they are in adults and, as a rule, if a child's bowel can be promply emptied and then washed with bile it speedily recovers from an ordinary intestinal derangement In what are known as the offensive diarrhœas of children, there is always an absence of bile or the product is of a vitiated and deranged character When from any cause the digestive processes become abnormal and the various secretions associated therewith become changed, and their varied components lightly held together the introduction of an external cause of further disintegration produces changes often of a rapid and resistless type A few days and nights with the thermometer in the nineties gives an impulse to putrefactive processes wherever devitalized tissue, a cell and a trace of moisture are brought together, and that, as we all know, is everywhere wherever humanity may congregate The same atmospheric condition permits an exaltation of body temperature in the child through its lack of tonic influence upon the trophic centres and peripheral surfaces by which the tissues—superheated through the rapid building changes of child life—are strained to the utmost tension in the effort of resistance against the potencies tending to excessive disintegration, a tendency which makes the secondary results of micro-organic attacks so often disastrous

The train of symptoms once inaugurated you too well know to have them reviewed at this time The introduction of a microbe of fermentation or putrefaction into the intestinal canal under such favorable circumstances is only the first step—and these germs are everywhere as suggested before The instinct of a child to put everything into its mouth leads the way to infection from a hundred unsuspected sources, and only the most extreme watchfulness and cleanliness in everything can avert the threatened danger The child at the breast has dangers in general to fear, with the special liability of the mother to inaugurate changes in her milk from the influences of disease, overwork, menstruation and the various disturbing passions of mind and body, but its dangers are trifling compared with the child that is carelessly fed from the bottle, the slop jar, the table and the street

Prof Vaughan has said in his modest way "cholera infantum and summer diarrhœa *may* be due to the action of tyrotoxicon produced by fementation in milk foods " I believe that a large proportion of such cases are so caused—far more than has been heretofore realized, and that most of the remainder may be traced to other sources of micro-organic life The amount of traumatic or local inflammation from other causes in children are few indeed The first ingestion of the food poison is of course met by a prompt effort to expel the same by emesis and purging where the amount is at all great—and if the effort is successful a few doses of the bromides or other nervous sedative is the only remedy needed Going a little further—a retention of a few cells in the folds of the intestines establishes a breeding ground for a continuance of the trouble, while the action of the special alkaloid upon the epithelial tissues tends to produce disintegration therein, and in its turn adds fuel to the fires only half spent Where the quantity of poison ingested is large the structure involved is often so great as to produce the most extreme shock with inability to recover When it is small a slower course is pursued and a more general involvement is manifest—the case drifting into the ranges of sub acute and chronic forms

In the special management of these disorders, my own course will probably best illustrate my views If called to see a child in the first symptoms of the first stage, while active vomiting is still present, or if from any cause I suspect the stomach contains any material, I give a prompt emetic, and I have never found anything better than a few grains of ipecac in a strong solution of chloride of sodium—the former

I always have in my pocket, and the latter, a powerful antiseptic and germicide, is found in every pantry, promptly following this with whatever antiseptic remedy of a pleasant taste and harmless action I find most convenient, some aromatic and sedative powder or solution, and minute doses of mild chloride of mercury, perhaps, for a few doses, especially if the discharges are putty-like and offensive, to be accompanied and followed the second or third day, if the case is not promptly restored, by very small doses of the bichloride in solution The persistent application of the warm pack to the body—to the water of which mustard or other irritant may be added—will be found an excellent adjuvant

If a stimulant seems called for the aromatic spirits of ammonia will prove efficient, and good brandy or aromatized whiskey may be given, but never wines or other fermented liquors, until the stage of convalescence is fully established, and then no stimulant is called for During the active period of the disease all milk and forms of milk food are withheld, because of the fact that the poisons within the body, along with the subnormal status of digestion, promptly taints such foods and make them only an additional source of irritation I am in the habit of withholding for awhile almost all foods as such, and giving some one of the numerous forms of nutrient tonics in minute doses One of the best of these is Phillips' "Syrup of Wheat Phosphates" The disorder in early stages is one which will bear much starving, as the rest to the digestive organs is invaluable

I rely upon no special remedy or combination of remedies Nature—our very best guide when we get acquainted with her—has provided innumerable means for combating these dangers, and it seems to be our chief duty to select that formula, in a given case, which will prove the most efficient, and which is the most readily tolerated The bichloride I do not give at first, because of its tendency to nauseate, and it has seemed to me to be better adapted to the second stage, when the tissues were softened and inclined to break down in putrefactive changes, *i e*, it is better adapted to overcome and avert the consequences of ptomaine action, than as a direct germicide—for which latter purpose the sulpho carbolates and the aromatic antiseptics, with mild antacids, are more easily borne and equally efficient

The solution of hydrastis and bismuth is an elegant remedy from which I have obtained fine results, especially in combination with "listerine," which is a compound of several pleasant vegetable antiseptics with boraco benzoic acid Resorcin is bitter, naphthalin is vile, and the salicylates very unpleasant—at least such is my experience and observation

Anisic acid—an elegant article—iodine, tannic acid, the turpentines, ergot, hamamelis, arsenic, camphor, chloral, opium, belladonna, quinine, etc, etc, all have their uses and their places in various formulæ, to suit the convenience or fancy of the physician or the idiosyncrasy of the patient Anisic acid seems especially adapted to cases in which there is a great accumulation of gases in the intestines, and an irritable condition of the muscular coats

Tannic acid is particularly indicated in dysenteric types and those cases where there is a remarkably softened condition of mucous membrane with hæmorrhagic symptoms It surely has an action apart from its chemico mechanical functions, as we may infer from its remarkable potency in overcoming the toxic effect of digitalis poisoning, and from the almost absolute freedom from cholera infection of those who use it largely in their special pursuits Given as tannate of quinine we have a remedy in the cases under consideration of easy availability and positive power

Hamamelis is another valuable remedy of which we know too little in actual practice As a local means of relief when there is great tenderness and undue relaxation of the rectum, I have obtained excellent effects from an enema of a combination of tannin, concet ext witch hazel, ergot and morphine in starch water after each evacuation from the bowels

Ergotin is a reliable drug for steadying the nervous system, when we find the vaso-motor and ganglia are losing tone and weakening in duty

Opium should be used with the most extreme caution and watchfulness, only seeking when we do use it to obtain its sedative and tonic effects

As to the other remedies mentioned, their proper positions in the line of management will readily suggest themselves to the thoughtful physician

I would only urge, in conclusion, that whatever special remedies or particular formulæ may be adopted, give everything in the smallest doses practicable and frequently repeated A minute but tangible dose of a well selected remedy, prepared in pleasant form and given every few minutes until its power is manifest, in these disorders of children, will generally succeed where larger doses at longer intervals will prove unavailing The causes of this are easily understood by those who care to seek therefor The theory is sound for the practice which we recommend—a practice which we know to be successful

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FOREIGN BODIES IN THE AIR PASSAGES

BY D LACOUNT, M D,

OF CHILTON, WISCONSIN

I report these cases of foreign bodies in the air passages for the reason that I believe there are many cases in which foreign substances have entered the air passage and produced death either within a few hours or after prolonged suffering, with destruction of one or both lungs accompanied by symptoms closely allied to tuberculosis of the lungs, without any suspicion on the part of the attending physician as to the true cause of the disease while the patient lives Where a foreign body is suspected the post-mortem examination is resorted to, and finding the foreign substance clears up the doubt Parents are often unaware of the fact that a child has drawn a foreign substance into the trachea, and the attending physician is left to wander in the dark as to the cause of the attack under consideration A careful examination of the chest should be instituted where a foreign body is suspected and if such substance be found it will modify the subsequent treatment, and

take a great load from the physician's mind The following case illustrates this

Case 1 —H S , æt 4 years, on August 3, 1876, while sitting upon the floor playing with some beans and having some in his mouth, became frightened by my presence (I having stepped in to visit another child having an attack of the measles) and in the act of crying, as is supposed, drew one of the beans into its trachea The child continued to cry for a short time and had a mild fit of coughing, but no dyspnœa I left the house not thinking there was anything the matter with the child, to be called back to see him in the course of one hour, finding him with a high fever I made an examination of the chest, at this time I did not suspect a foreign body in the trachea, and found the left bronchus plugged so that very little air was admitted It is very unusual for the foreign body to enter the left bronchus In a large majority of cases, the right bronchus is the favorite locality as is well known, owing to certain anatomical peculiarities In this case, however, the foreign body had entered the left bronchus, producing a severe attack of pneumonia of the left lung which lasted ten or twelve days, and then gradually or partially subsided, and assumed a chronic form The patient became emaciated, had a cough, spasmodic in character, without expectoration, (the patient being too young to expectorate) and in fact all the symptoms of pulmonary tuberculosis, which at the end of six months ended in death The patient at the time of his death was sitting upon the floor playing, and in the act of coughing became asphyxiated and died Twelve hours after death I made an autopsy, and found on removing the sternum and costal pleura, an intense congestion of the outer surface of the left lung, with an accumulation of pus in the chest cavity The costal pleura was intensely injected In the upper lobe of the lung an abscess had formed of large size, and bursting had discharged its contents into the cavity of the chest In making an incision through the center of the lung, there were discovered numerous small or diffused abscesses On laying open the bronchi, I found the bean at the bifurcation all intact, but somewhat softened and enlarged, lying transversely plugging up both bronchi, causing death immediately The original position of the bean was in the left bronchus, and in the act of strangling it was dislodged from its situation and lodged at the bifurcation

Not being positive as to their being a foreign body in the air passage, the treatment was to combat the pneumonia, although somewhat apprehensive as to the real cause Under the circumstances in which I was placed, having a case of measles in the same house, and this child was expected likewise to be afflicted, it threw me off my guard and led me to think it might be the onset of an attack of that disease Of course, the onset was too abrupt, but still it left my mind unsettled as to the cause of the disease The patient not being asphyxiated at the time of swallowing the bean, and no severe symptoms presenting themselves and the parents not knowing positively that a foreign body had entered the air passage, if the surgeon had diagnosticated the case and was quite certain as to there being a foreign body in the bronchi, it would have been impossible for him to gain the consent of the parents to an operation It has been my experience that people will not consent to an operation until it is too late for it to prove successful and the patient is lost

Case 2 —H. M , æt 3 years and 4 months, while playing in a garret with another child swallowed a bean On the return of the parents, at 1 o'clock P M , they found the child coughing violently, and on questioning him disclosed the above fact The parents not being very intelligent did not suspect any serious trouble until the patient's cough increased and was attended with considerable dyspnœa The child gradually grew worse until 11 o'clock A M of the next day, when he expired I was called, but did not arrive in time to see the patient alive One hour after death I made a post mortem examination and found a bean well packed in the right bronchus

Now in *Case 1*, the foreign body was found at the bifurcation, but it had evidently been in the left bronchus for it could not have remained for six months where it was found At the examination, it was clear that the bean had located itself well down in the left bronchus, and in the act of coughing, just before death, was dislodged, carried to the bifurcation and immediately caused suffocation The foreign body being the same substance in both cases it is singular that the symptoms were so different, one terminating in death after six months, the other in from eighteen to twenty hours I am led to believe by this that a foreign body entering the left bronchus does not cause death so soon as when it lodges in the right The right lung being somewhat larger than the left there is more breathing surface left for the patient, although it would seem that this difference in size would not be sufficient to prolong a patient's life for six months I remember having a patient thirty years ago, an adult, who had received a gun shot wound in the left lung, lower lobe Inflammation set in, terminating in abscess, and the whole lung broke down into pus, except a small portion along the middle line, filling the left thoracic cavity, in other words, empyema Paracentesis thoracis was performed and a great amount of pus was discharged, and continued to discharge up to the time of his death, which occurred two months later Twelve hours after death I made an autopsy, and found only a small portion of the lung remaining, about the size of a man's hand This patient must have lived at least four months without any use of his left lung He died six months after receiving the gun shot wound

Case 3 —M J , æt 4 years, on March 14, 1885, while having carpet tacks in her mouth, one was drawn into the windpipe causing a severe fit of cougning, but no great dyspnœa She informed her parents of what had happened, and was immediately brought to my office On examination of the chest I came to the conclusion that the foreign body was in the right bronchus from the feeble respiratory murmur and a peculiar bronchial wheezing located just under the articulation of the second costal cartilage with its rib Emetics had been administered before coming

to me, also slapping on the back had been tried, but to no purpose Seeing no immediate danger unless it was from an attack of pneumonia, I advised the parents to make no further attempt to procure the foreign body In all probability the foreign substance would soon be expelled by coughing

After leaving my office they accidentally met a medical student from the College of Physicians and Surgeons, of Chicago, who recommended them to proceed immediately to the College, where one of the surgeons in attendance would perform tracheotomy and remove the tack His advice was accepted, and on arriving at the College, the patient was examined by Professors St John and McWilliams They came to the same conclusion, that as long as the patient was not in any immediate danger, they would refrain from operating and take the chances that sometime the foreign body would be expelled by coughing About a week or ten days after the patient returned home she was attacked with measles which ran its course in the usual time The disease was accompanied with severe bronchial irritation, and in one of the paroxysms of coughing the foreign body was expelled just four weeks from the time it entered the trachea and the patient recovered perfect health

Case 4—F R, æt 7 years, in July, 1885, while having the upper half of a sixpenny nail in his mouth swallowed it, and it passed into the trachea He immediately began to cough His mother, however, did not believe that the nail had entered the windpipe One week after the accident I was called, and found the patient laboring under a severe attack of pneumonia of the right lung, which ran its course in ten days and an effort was made toward convalescence During the pneumonic attack there was slight cough which soon subsided, the patient, however, remaining quite weak and feeble Four weeks from the day the foreign body entered the trachea, he had a severe paroxysm of coughing which lasted one hour, during which the foreign body was thrown out The child began to improve immediately and was soon in perfect health

In this case I think the foreign body was in the right bronchus I could not tell positively, for the reason that the pneumonic symptoms masked all others In all these cases it was not positively known that foreign bodies had entered the air passage, therefore no operation was performed for the relief of the patients In my opinion the mortality would have been greater if they had been operated upon According to statistics, in 75 cases without operation 70, or 93 33 per cent recovered, and 5 or 6 66 per cent died Of 34 cases in which bronchotomy was practiced 26, or 76 47 per cent recovered and 8, or 23 53 per cent died, a death rate 16 87 per cent greater than in cases without operation

MEDICAL PROGRESS.

SALOL IN ACUTE ARTICULAR RHEUMATISM AND ACUTE FEBRILE DISEASES —Salol was discovered by Professor von Nencki in Berne some years ago, but has hitherto been little used as a medicine Sahli, of Berne, has recently recommended it strongly for the treatment particularly of acute articular rheumatism and acute infectious diseases HERRLICH, after thoroughly testing it, is convinced of its value In salol there is an ether combination of 60 per cent of salicylic acid and 40 per cent carbolic acid It is salicylic phenol ether It is a white crystalline powder with an agreeable, slightly aromatic odor Its taste is bitter Salol bears a resemblance to fats as regards both its chemical composition and its physical properties Like fat, it cannot be dissolved in water, but is easily soluble in alcohol, ether, and in volatile and fat oils It possesses pronounced antiseptic qualities, equal, according to Nencki and Sieber, to those of salicylic acid It prevents the development of putrefactive germs, and meat can be kept by it for an unlimited time But it does not act to any considerable extent as a disinfectant, like sublimate Applied outwardly as a powder it is a powerful antiseptic, and being insoluble, it does not irritate the skin, as its component parts salicylic acid and carbolic acid do One drawback is that, owing to its pliant nature, it is difficult to bring it into the form of a powder Sahli recommends the use of sugar of milk in its pulverization Taken internally it is resolved, according to Nencki, into salicylic acid and carbolic acid by the action of the pancreas ferment Thus salol passes through the stomach unchanged, without particularly inconveniencing it, and only in the upper part of the small intestine, when it comes in contact with the pancreas ferment, does it fall into its component parts The mucous membrane of the small intestine absorbs the two acids so quickly that, soon after 2 grams of salol have been given, the two acids are traceable in the urine as salicyluric acid or phenol ether sulphuric acid The urine becomes of a greenish black or deep black color It is remarkable that while this symptom would, in connection with the surgical application of carbolic acid, indicate poisoning, it has no significance after the internal application of salol The dose recommended by Sahli is from 6 to 8 grams a day

The interest of the internal application of salol is chiefly connected with its carbolic factor What has been impossible is now feasible, viz to introduce with ease and safety large doses of carbolic acid into the body

Sahli has published a report in which he states that with salol acute articular rheumatism has been treated with the most favorable results, that its effect on endocarditic complications has been very good, and that it alleviates the pain of chronic articular rheumatism The only bad secondary effect mentioned by Sahli is tinnitus aurium Salol can be given only in form of a powder, the single dose being up to about 2 grams The powder is given in a wafer, or perhaps more easily in compressed tablets Herrlich treated more than thirty cases of acute articular rheumatism with salol, and in addition a number of chronic cases and some typical cases of muscular rheumatism, lumbago, and omalgia Acute articular rheumatism is very

favorably affected by salol and cured The effect on chronic articular rheumatism and muscular rheumatism is palliative Herrlich cannot determine how much of the anti rheumatic effect is due to the carbolic acid In the treatment of articular rheumatism, salol agrees with the patients if their general health is good, and has few bad secondary effects but it cannot prevent relapse, nor has it any apparent favorable effect on endocarditic complications Among his cases was one of a girl, 9 years of age, with acute severe feverish articular rheumatism He gave daily from 3 to 4 grams of salol in single doses of 0 5 grams The articular symptoms disappeared as if by magic But already in the first few days, as is so frequently the case with children, endocarditic complications appeared which in three months led to complete mitral insufficiency In a week there was the first recurrence of articular symptoms, which yielded promptly to salol The came another relapse which, by way of comparison, he treated with antipyrin, which did not prevent a further relapse The case was still under treatment

Herrlich has found that feverish articular rheumatism is particularly favorably influenced by salol This seems to agree with the action of anti-rheumatic remedies generally Herrlich treated with salol eight cases of typhoid, some cases of puerperal fever of the protracted pyæmic form, three cases of genuine pneumonia, two cases of ulcerative endocarditis, and one fatal case of diphtheria The stronger the general condition of the patient, the better was the effect of the salol Its antipyretic effect is fairly certain, and apyrexy is on the whole free from inconveniences, perspiration being also moderate No collapse of temperature was observed Herrlich found the disturbances of the stomach to be the most serious drawback in the use of salol in the case of weak typhoid patients, there being præcordial oppression, distension, and nausea, and in some cases vomiting and loss of appetite But in most cases the medicine agreed well with the patient There was one case of real carbolic acid poisoning in a woman suffering from chronic articular rheumatism, who had taken 24 grams of salol in three days—on the third day 10 grams She had violent vomiting, long continued loss of appetite, and general depression, from which, however, she recovered in a few days There was also a high degree of dysuria and tension of the bladder, with profuse urine containing much phenol

Shivering, which follows modern antipyretics, is sometimes observed after salol One typhoid patient suffered from it nearly always when the effect of the salol was ceasing, the temperature rising rapidly But this does not occur much more frequently than in the antipyrin treatment —*The London Medical Record*, July 15, 1887

VILLOUS PAPILLOMA OF THE BLADDER REMOVED BY SUPRAPUBIC CYSTOTOMY —E D PAOLI reports the second case of this kind in Italy The first, operated on by Marcacci, died Paoli's case was that of a woman, æt 47, who had had symptoms for 7 years The tumor could be felt through the dilated urethra, but was inacessible by the spoon, being at the vertex vesicæ Suprapubic cystotomy was performed, and the tumor easily reached The bleeding insertion was tamponed with liquor ferri temporarily, after hæmorrhage was arrested the bladder and skin were sutured in the upper two thirds, and a drainage tube and iodoform gauze placed in the lower third On account of insufficient distension of the bladder the peritoneum reached to the symphysis, and had to be pushed back Permanent catheter Transient fever on 16th day, with some fetid urine The patient recovered in a little more than one month The tumor was a simple papilloma —*Centralbl fur Chirurgie*, No 20, 1887

TRANSPLANTATION OF TENDON —PEYROT reports the case of a 14-year old boy who had had both flexor tendons of the middle finger cut, and after that the finger could only be flexed slightly with half of the interosseous The ends of the divided tendons were about 4 cm apart Peyrot united them with small pieces of tendon taken from a young dog at the time, and fixed the pieces with catgut While the wound in the skin did not heal by primary union, the pieces of transplanted tendon healed in On account of adhesions with the cutaneous cicatrix movement was not complete, but was very much better than before the operation —*Centralbl fur Chirurgie*, No 20, 1887

DIAGNOSIS OF BEGINNING CARCINOMA OF THE CERVIX —Since experience has shown that beginning carcinoma of the cervix can be entirely cured by operation, it is important that family physicians send the patients to the specialist early And in order to make at least a probable diagnosis without microscopic examination of an excised piece, C H STRATZ says that from his observation and that of others the important signs of carcinoma are as follows

1 The diseased place is sharply limited by sound tissue, and never goes over into it by degrees

2 A difference in the level of the whole diseased portion can always be made out

3 Carcinomatous portions have always a light yellow color

4 The malignant deposit is usually shown as finely granular, whitish yellow glistening elevations, at least in individual places —*Centralbl fur Chirurgie*, No 25, 1887

TREATMENT OF SCABIES —FOURNIER advises

1 A thorough soaping of the parts, followed by a full bath

2 Frictions over the body with the following mixture

℞	Glycerine	2 parts
	Gum tragacanth	1 100 part
	Flowers of sulphur	1 "
	Carbonate of soda	½ "

After this a second full bath must be taken The linen of the patient and the bed linen must be carefully laundered, and gloves which have been used must be burned On the next day it will be useful to give emollient baths, and to apply powdered starch or glycerite of starch —*Nouveaux Remedes*, May 24

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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THE CONGRESS IN WASHINGTON

In more than one respect was the Ninth International Congress a success Some of our visiting confrères from Europe say that from a scientific standpoint no Congress ranks higher, and that the proceedings, when published, will reveal a wealth of learning among Americans of which the profession generally in Europe has been entirely ignorant It is not from a boastful spirit that we quote this opinion, though even in that case we might be pardoned, since, truth to tell, many things have been said of us on the other side of the ocean that were anything but flattering

Heretofore the knowledge of Europeans and Americans of one another—or we may in this case speak generically and say, of each other—has been one-sided This is to be explained in great part by the one sidedness of the visits Many Americans go to Europe, but comparatively few Europeans come to America Many of the Americans who go abroad, while wealthy, are not of the kind to produce a pleasant impression or raise our country and institutions in the estimation of foreigners

Let us hope that whatever pleasant impressions were produced on our visitors from abroad, from whatever country they came, may be so lasting that they and others may be induced to visit us again, and that too before another International Medical Congress meets in this country We would gladly know them better, and would have them know us better We would have them feel, and will endeavor to show them that as science is not bounded by geographical lines nor limited by oceans or mountain chains, and as each laborer in the field of science, however humble and unknown he may be, can claim all other workers as his brothers, more especially when their chosen field of labor is the alleviation of human suffering, so hospitality, good feeling, brotherly kindness can and do have a home in America It is not impossible that many of our visitors came, as Dr Martin of Berlin said he came, with some doubts Let us hope that, like him, all went away from Washington with the doubts all removed And such was the case if he, and Dr Grailey Hewitt, Dr Landolt and Dr Edmund Owen represented in their remarks on the last day of the Congress the sentiments of the other visitors Dr Hewitt said he was requested on the part of the foreign members of the Congress to express in a few words the sense which was entertained by them of this Congress and of the efforts which had been made by the Executive Committee of this Congress for the furtherance of the objects of this great meeting, and to convey to them the grateful thanks of the foreign members for the attention bestowed upon the matter and their grateful appreciation which has attended their efforts He desired also to express their sense of the hospitality and the kindness and attention which they had received, both in public and in private, which would make their visit to Washington a source of gratification and happy memories in the future

Dr A Martin, of Berlin, expressed in German his thanks for the kindness he and other members of the Congress had received and gratification at the success of the Congress He had come here with some doubts These were all removed, and the great success of this Congress would secure it a high rank among the Congresses that have been held It had been the custom to engrave the names of the victors at Olympic games on plates of gold They could not so record the names of their entertainers, and the only means of expression for their sentiments was by a vote of thanks

Dr Landoldt, of Paris, said "I have been commissioned to express to the President of the United States our sentiments of profound gratitude Although feeling that I am unable to find words proper for the occasion, I accepted the honor, since the gratitude that springs from the heart has no need of eloquence to make it understood " When the applause that this sentiment produced had subsided Dr Landolt proceeded, saying

"Mr President and gentlemen, we have already assisted at a series of International Congresses We have been well received everywhere The countries of Europe have rivaled each other in their zeal to make our stay with them in their most beautiful cities pleasant, but it has not often been our lot to see the Chief of the State mingle in person among us and take part in our la-

bors The President of this great Republic came among us to bid us welcome with his sympathetic voice He invited us to his own home and gave to each of us a hearty grasp of the hand, significant of his most cordial hospitality The sanction given by President Cleveland to our Congress has given the greatest charm to our stay in this Capital Returning to our hearths we will preserve the most grateful and respectful remembrance of the President of the Republic, and we say to the whole world that the United States, already so favored, possesses above everything a Chief who directs them surely in the way of progress and prosperity "

Dr Edmund Owen thought he was admirably qualified to discourse on American politics, as he was entirely ignorant of the subject In science we have no politics "We are extremely happy," he said, "to have visited the United States during the Presidency of Mr. Cleveland" He said he asked an American friend the other day, and a very intelligent man, if he voted for Mr Cleveland, and the American said "no" Then he asked the American if he were satisfied now, and the laconic answer was, "guess I am" "If that question were put to this meeting, 'are we satisfied?' I say 'guess we are' A great man like the President might have found something else to occupy his attention, say, in the White Mountains about this time of the year, he might have been driven away by the doctors, but instead of that he remained here to welcome them When the history of this grand country is written we trust President Cleveland will have a niche in the temple of fame side by side with those great men, Lincoln and Garfield When you are in our country we love to hear you say, 'We admire your Queen' We can say to you with all truth, we admire, we love your Queen, her beauty and grace, and in seconding this vote of thanks, we simply express a prayer that Mr President Cleveland and Mrs Cleveland may long continue in strength and health to preside over a happy, a prosperous, and a united country "

We are sure that few if any will regret that the next Congress will be held in Berlin, and more especially since it will be presided over by the greatest of the great medical men of a great nation Medicine is indebted to Germany for much, but probably most of all for Rudolph Virchow

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THE NEW LOCAL ANÆSTHETIC

A few months ago we noticed the discovery by an Australian physician of an alleged new local anæsthetic, drumine, which does not thus far seem to have fulfilled all that was said and expected of it It is to be hoped that the latest addition to our meagre list of vegetable local anæsthetics will not prove to be also a disappointment

Stenocarpine, a supposed alkaloid from the leaves of a botanically unknown tree, after being tested by Dr A M Seward, of Bergen Point, N J, and Dr J Herbert Claiborne, Jr, of New York, has been more recently examined and carefully tested by DR EDWARD JACKSON, of Philadelphia, who reports his observations in the *Medical News*, of September 3, 1887

Before further describing its action it should be said that, whether the name "stenocarpine" will finally prove to be the correct term or not, it should not have been given to the drug until the tree from which it is obtained is definitely and botanically determined As the matter now stands it is not at all certain whether the tree is the *Acacia stenocarpa*, *Gleditschia tricanthos* (Honey Locust), or *G meno-sperma* (Water Locust), though the leaves are said to resemble those of an acacia Mr Goodman, a veterinary surgeon, who first noticed the apparent anæsthetic properties of a poultice made from "a pile of leaves raked hap-hazard from the ground," says that the source of the leaves containing the anæsthetic principle is known in Louisiana, where the substance was first used, as the Tear-blanket tree, which bears pod 8 or 10 inches long and slightly curved, containing seeds and a viscid juice The tree grows to a height of 35 or 40 feet, with a diameter to the bole of about 18 inches, and a spread of foliage of about 30 to 35 feet The tree is furnished with clumps of forked spines or thorns, long, tough and highly polished This description corresponds very closely, if not exactly to what is known in the Southern States—and as far North certainly as Virginia—as the Honey Locust

Dr Seward found that it produced local anæsthesia in the eye of a cat, and Dr Claiborne found that it produced local anæsthesia in the eye of the rabbit and of man, that gtt ij of an aqueous solution produced complete insensibility of the cornea and conjunctiva in a few minutes, with dilatation of the pupils, the anæsthesia lasting about half an hour, and the dilatation of the pupils for 36 hours As Dr Claiborne reported that in some cases a few drops of a 2 per cent solution on the skin caused almost absolute anæsthesia, so that tumors, warts, *etc*, could be painlessly removed Complete local anæsthesia was also produced in the nose, and the instillation of a few drops in the ear permitted the touching of the membrana without pain

Dr Knapp, of New York, also experimented with the substance and produced anæsthesia of the mu-

cous membranes of the eye, nose, throat, urethra and rectum Given hypodermatically it produced local anæsthesia of the skin, and a drop on the glans penis produced anæsthesia Injected into the cellular tissue of rabbits it caused violent attacks of tetanoid convulsions, of which opisthotonos was a prominent feature, recurring every 10 to 40 seconds for about 15 minutes, and followed by recovery in an hour From ♏ 5 to 25 was required to produce these symptoms Death in 10 seconds was caused in a rabbit by the injection of ♏ 10 into a vein of the ear, fibullary convulsions or tremors of the anterior portion of the body preceding death The symptoms closely resembled those caused by strychnia poisoning

Dr Edward Jackson experimented with some of the 2 per cent solution It was clear, of a faint brown tint, and distinctly bitter, and a few seconds after its application to the tongue and lips there was a peculiar sensation of the numbness precisely similar to that caused by cocaine, but more intense than that caused by the 4 per cent solution of cocaine Dr Jackson has not seen constitutional symptoms produced in any human subject, though this may be accounted for by the fact that not over ♏ iv of the solution were used in any one case He placed gtt j in his left conjunctival sac, causing smarting more severe than any similar application of a 4 per cent solution of cocaine, but still not severe, and passing off in a few seconds This was followed by a feeling of "stiffness," "dryness," or "coldness" of the lids, such as cocaine produces, and an immediate widening of the palpebral fissure Within 2½ minutes there was complete anæsthesia of the conjunctiva and cornea In 20 minutes the anæsthesia was less complete, and in 1 hour entirely gone The power of accommodation was very nearly or quite abolished in some cases by a single instillation, and was always abolished if the instillation was repeated When no other mydriatic was used recovery of the accommodation and pupil was almost complete at the end of 3 days When the drug was used to paralyze the accommodation in order to determine the refraction the results were satisfactory, in one case the subsequent use of duboisine revealing no additional hyperopia When used simultaneously with duboisine, homatropine or hyoscyamine it caused a wider dilatation of the pupil than did the other mydriatic

Dr Jackson could not determine positively that it caused any change in the degree of intra-ocular tension In no case could it be perceived that the corneal changes which are sometimes produced by a 4 per cent of cocaine took place after the use of this new drug There seems to be less blanching of the conjunctiva in the normal eye and in those eyes suffering from acute catarrhal conjunctivitis than is the case from the use of a 4 per cent solution of cocaine

When injected under the skin of the forearm gr jss of the solution caused complete anæsthesia of an area about 4×8 mm in extent, reaching mainly from the seat of the injection *towards the extremity of the limb* The anæsthesia was noted instantly, but seemed to extend its area for about 10 minutes, and disappeared in half an hour By applying it externally to the skin Dr Knapp failed to produce anæsthesia, but Dr Jackson produced complete anæsthesia in this way The point of application was simply kept moist with the solution, and the anæsthesia was very marked in 10 minutes, and continued to increase for 30 minutes, at the end of which time a needle could be plunged into the skin without the slightest sensation In one of these trials on the flexor surface of his forearm, at the end of 10 minutes Dr Jackson began an incision, and keeping the blood wiped away and the surface continually moist with the solution, completed it within 5 minutes more, to the depth of 3 mm , without the slightest unpleasant sensation, either at the time or afterwards The anæsthesia is very superficial, and to make a painless incision in the skin it must be done by repeated superficial cuts with the knife, and at the same time keeping the cut surface bathed with the solution A very important point, according to Dr Jackson, is that the skin must not be previously treated with soap and water, or with any alkali, as in this way the alkaloid of the solution is promptly precipitated—and this is most probably the cause of Dr Knapp's failure to produce anæsthesia of the skin by direct application of the solution But when the alkaloid has been thus precipitated on the skin the application of a dilute acid solution will bring about anæsthesia

In Dr Jackson's opinion the solution used, said to be a 2 per cent solution, is a more powerful anæsthetic than the 4 per cent solution of cocaine, though the new drug seems to exert less influence on the local circulation and nutrition of the cornea than cocaine It has a much greater power of paralyzing the accommodation than cocaine And yet "the recovery after the use of the new drug is more rapid than after any other efficient mydriatic, except homatropine, and it has a more powerful influence over accommodation than homatropine The superiority of the new drug in this direction is especially manifest in its ability to overcome the influence of eser-

me Thus the influence of cocaine on the pupil is overcome by one-fiftieth of its weight of eserine, and its influence on accommodation by still less Homatropine is neutralized by one eighth its weight of eserine But this drug requires two thirds or four-fifths of its weight of the myotic to overcome it If it is a local anæsthetic more powerful than cocaine, and a mydriatic more powerful yet brief in its action as homatropine, it must be a new drug, and one of great practical importance "

NEW DISEASE OF THE LIPS AND MOUTH

MR JONATHAN HUTCHINSON has recently drawn attention to a disease which, he believes, up to the present has not been recognized It is a form of inflammation of the lips and mouth in which superficial ulcerations occur, followed sooner or later by some form of skin disease and leading to a fatal termination The exact form of skin disease varies, but the hands and feet are the parts usually affected, the nails being especially prone to suffer In some cases the eruption may consist of bullæ, followed by free papillary outgrowths No special antecedents can be alleged as the probable cause of the malady, but the disease has only been observed in middle life or in early senile periods If not checked by treatment the disease appeared to run its course in about six months, death being produced by exhaustion Mr Hutchinson considers that opium given in repeated doses will cure it, and that there is hardly any tendency to relapse afterwards All the best marked cases he had observed in males, but in several milder ones the patients were women Careful inquiry had failed to support the suspicion that the disease might be due to contagion from animals He has lost two patients by death, both were those first observed, and since the discovery of the signal efficacy of opium, no case had ended fatally The observation as to the efficacy of opium was simultaneously made by Mr Pollock and Mr Hutchinson, two different patients being at the same time under their separate treatment and recovering under this drug Since that, every case yielded if the dose of opium were sufficiently pushed In one, however, the disease did not yield quickly, and for more than a month seemed likely to end in death As regards permanency of cure, in one case the patient was known to be quite well four years after his recovery, in another the same result had occurred, and in a third a period of two years had elapsed In two of the milder cases, the disease had repeatedly recurred A great variety of remedies was tried without benefit before the use of opium was resorted to One thing particularly noted was the fact that in no single case had there appeared to be any tendency to spontaneous improvement In all cases the inflammation of the mouth and lips took precedence of the skin symptoms, and in some the latter were very slight Another fact was that he did not know of any case that had as yet been obtained amongst the poorer classes of society Mr Hutchinson suggests that the affection is allied to other forms of disturbed health attended by skin disease and occurring in early senile periods, such as certain peculiar varieties of pemphigus, pityriasis rubra, psoriasis and lichen planus In confirmation of this suggestion he mentions a case of an elderly lady who had a kind of spreading eczema-psoriasis of the hands and scalp She lost her hair and nails, and was rapidly failing in health in spite of various measures of treatment, but finally recovered quickly and completely under opium, but her case did not belong to the class described, because she never at any time had inflammation of the mouth

A MYOPIC HORSE —One of the attractions, and an observed of all observers, of the Clinton market-place in Boston not long since, as we learn from a daily paper, was a horse wearing spectacles The animal was very near-sighted, and an oculist took the necessary measurements and had a pair of concave glasses made for it Unfortunately the report does not state just how the animal was examined, whether he can count fingers at ten feet, or what Jaeger test type he can now read

SOCIETY PROCEEDINGS.

AMERICAN DERMATOLOGICAL ASSOCIATION

Eleventh Annual Meeting, held in the Hall of the State Medical and Chirurgical Society, Baltimore, August 31 and September 1 and 2, 1887

(*Concluded from page 347*)

THURSDAY,—SECOND DAY

At the business meeting the following were elected

OFFICERS FOR THE ENSUING YEAR

President —Dr I E Atkinson, of Baltimore
Vice-President —Dr P A Morrow, of New York
Secretary and Treasurer —Dr G H Tilden, of Boston

The report of the Committee on the *Congress of American Physicians and Surgeons* was received and adopted

Dr I E Atkinson, of Baltimore, was appointed

representative to the Executive Committee of the Congress, and Dr G H Tilden, of Boston, alternate

Dr E B Bronson, of New York, presented a

CLASSIFICATION OF DISEASES OF THE SKIN

The classification was made upon an anatomical basis The cutaneous affections were divided into the following five classes 1 Idiopathic neuroses 2 Angioses 3 Epidermidoses 4 Cryptoses 5 Dermoses Diseases of the skin were further subdivided into sub orders, tribe, families, genera and species

Dr P G Unna We can never have a complete, definite, scientific classification of affections of the skin. As the knowledge of disease progresses so must our classification change The ideal classification would be one made not upon an anatomical but upon an etiological basis

Dr L D Bulkley I would express great admiration for the classification which has been presented, but I think that it is hardly suited for practical every day use As an attempt to scientifically classify diseases of the skin, it is far in advance of any classification yet offered

Dr L A Duhring, of Philadelphia, read a paper on

THE DIAGNOSIS OF DERMATITIS HERPETIFORMIS

The author had been led to believe from the perusal of various reports of cases that this affection was not thoroughly understood He therefore thought it desirable to offer some remarks with reference to its diagnosis The chief characteristic of the affection is the multiformity of the lesions manifested in the natural evolution of the disease If a given case remain sufficiently long under observation, multiformity of lesion will sooner or later be noted, and this will repeat itself Blebs, vesicles and pustules may appear together or separately Mixed eruptions are the most common, vesicles predominating In one attack or another only one kind of lesion may be present The disease presents clearly defined characters in distinct elementary lesion, and certain distinctive abortive lesions Secondary forms of lesions also exist Pigmentation of a dirty yellow or brownish hue, and variegated, is usually a marked feature in chronic cases Excoriations from scratching, with thickening of the skin, usually exist In no other affection are such varied combinations of lesions met with as in dermatitis herpetiformis Erythema and vesicles, or vesicles and blebs, or blebs and pustules frequently exist side by side in close proximity with more or less pigmentation, excoriation and secondary changes Itching is usually a most distressing symptom, and is most severe in the vesicular variety In the pustular form, subjective symptoms may be wanting The disease is extremely chronic, extending over a number of years In two cases under the author's observation, the duration had been thirteen and eleven years respectively, and the disease was still active, with no prospect of cure The eruption tends to recur at variable periods, usually six or eight weeks Some cases of dermatitis herpetiformis closely resemble cases of erythema multiformis, but the lesions of the former disease are less sharply defined and the course of the two affections is different, erythema multiformis, being an acute disease of short duration The disease occasionally resembles herpes iris, but the chronicity of the affection would exclude herpes iris The lesions are also more virulent and accompanied by a more profound degree of cutaneous disturbance Herpes iris is a benign affection, running an acute course and terminating in recovery, although subject to relapses When the bullous varieties exist alone they may resemble pemphigus vulgaris The combination with other lesions will, however, prevent any confusion in the diagnosis

With reference to the term dermatitis herpetiformis, the author stated that he had adopted it in preference to dermatitis multiformis for the reason that there was already a disease named erythema multiformis, and the use of the term dermatitis multiformis might lead to confusion and give rise to the opinion that it was simply an advanced stage of erythema multiformis

Dr L D Bulkley I wish to briefly report a case showing some of the difficulties of diagnosis A man was admitted to the hospital with remarkable skin lesions, and the case was regarded by all who saw it as one of dermatitis herpetiformis The patient was suffering with fever, and the temperature remained high until death In connection with the lesion of the skin there was a general alopecia of the body At the autopsy, generalized sarcoma was found affecting the spinal cord and various internal organs Whether or not the cutaneous lesions were simply the manifestation of the internal disease I cannot say

The President I cannot help thinking that the author has included in his description diseases of quite different nature Some of these cases are analogous to the old hydroa, others may be of septicæmic origin, while possibly some may be the result of local irritation It seems unphilosophical to consider these different conditions under one head I have seen as the result of bites of insects, lesions corresponding to those described in some of the cases of dermatitis herpetiformis I should hardly consider such a case as an example of this disease

Dr P G Unna, of Hamburg read a paper on

THE TREATMENT OF LEPROSY

The speaker, after referring to the fact that leprosy was usually considered incurable, and that as a consequence treatment was not resorted to, stated that he had recently treated five cases of this affection with encouraging results The treatment consists in the external use of the following ointment

Chrysarobin	5 parts
Ichthyol	5 "
Salicylic acid	2 "
Vaseline	100 "

This is applied to the nodules on all parts of the body, with the exception of those on the face, neck and hands In the latter situations pyrogallic acid is substituted for the chrysarobin in the above formula Such an application may be continued for months For some of the older nodules this is not sufficiently strong, for these the author uses salicylic acid or salicylic acid and chrysarobin in the form of

erator, and a born teacher He is only 47 years old, but looks much older He is of slender build, and his whole appearance suggests thoughtfulness and hard work

The surgical wards under his charge contain only 60 beds, but many rare and interesting cases His large operating room is intended only for small operations before the whole class, and for demonstrations and examinations of cases from the Policlinic In this room advanced students are allowed to perform minor operations under his personal supervision The more important operations are performed in a smaller room, which is supplied with every possible convenience for antiseptic work, it is the most perfect operating room I have seen, Volkmann's not excepted To the operations performed in this room only 5 or 6 students are admitted, and the regulations in writing posted on the door require that the students must not have been recently in the dissecting room or the pathological laboratory, and that they must come without collar, necktie, coat and vest, in fact must come into the operating room with nothing but shirt and breeches In how far the female students who attend Kocher's clinic can and will comply with these rules I am unable to say, as none of them came during the days I attended

For irrigation corrosive sublimate solution is used, for general use only 1 5000 When stronger solutions were used intoxication occurred quite frequently The wounds are covered with a flannel compress of sublimated gauze, generally dusted over with iodoform just before it is applied, and over this a cushion of aseptic moss

Kocher has a way of suturing wounds which should be more generally known, as it is done rapidly and neatly It is a form of continued suture, either with fine silk or catgut A long straight needle is threaded with the suturing material, and as an assistant makes traction with a blunt hook upon each angle of the wound so as to straighten its margins (a procedure which greatly facilitates the suturing) the needle is passed alternately deeply and superficially, so that approximation and coaptation sutures follow one another In this way a large wound can be stitched accurately in a few minutes For drainage, glass tubes or rubber drains are used Kocher's hæmostatic forceps are the best for general use His struma director is not only a useful instrument for strumectomy, but is very handy in all operations in which deep dissections are necessary close to large vessels

As I was passing through the surgical wards I counted 4 patients who had been recently operated on for struma, and they were all doing well Kocher informed me that recently wounds were inclined to suppurate a little, and he was unable to trace this to any tangible cause, but was inclined to believe that the catgut which was used was not quite aseptic He has been using catgut prepared in the ordinary way, but will return to his juniper catgut Dr Cavel has examined catgut made by Kocher's method, and has not always found it aseptic By experiment he has found that if the raw catgut be immersed in oil of juniper for 10 days it is perfectly aseptic, and if afterwards kept in absolute alcohol it remains so permanently He advises that when the catgut is taken out of the juniper oil it be washed with sulphuric ether before being transferred to the alcohol, as otherwise particles of oil cling to it and irritate the wound

I remained in Berne four days, and had an excellent opportunity to become familiar with the work in the surgical wards, but will only describe the operations of one forenoon to show what a man like Kocher can do in 4 hours The operations began at 7 A M, and a little after 11 o'clock the whole work was done The world knows that Kocher's great specialty is strumectomy He astonished us all a few years ago when he reported 101 cases of strumectomy at the time when he first called attention to the danger which follows complete extirpation of the thyroid gland, as in quite a number of his cases in which the whole organ was removed a condition allied to cretinism followed, which he described under the term cachexia strumipriva He has now performed the operation more than 300 times, and his results have been so good that in 100 consecutive cases he has not had a single death He looks upon excision of struma as one of the safe operations of surgery I was very anxious to see the master of this operation confronted with a difficult case Two cases were in the hospital awaiting strumectomy, and he selected for my special benefit the one which was expected to present the greatest difficulties

The patient was a woman about 40 years old, who had had a large neck since childhood For a number of years the tumor has been growing more rapidly, until at present it has reached the size of a fist, and is giving a great deal of difficulty in breathing, especially when the patient undergoes unusual exertion She was very anæmic The tumor was located almost centrally over the neck, but did not dip behind the sternum No fluctuation Chloroform was the anæsthetic, and was continued throughout the operation The external incision was made over the centre of the tumor, and obliquely across the neck Even before the tumor was reached a number of vessels had to be divided between the forceps The veins all around and beneath the tumor had walls as thin as paper, so that attempts to ligate them failed, and venous hæmorrhage had to be guarded against by compression Another difficulty from these thin-walled veins was that many times large trunks were accidentally injured in the blunt separation of the tumor from its surrounding tissues The extirpation lasted over an hour, and all the forceps which the institution possessed, some 60 or 70 were brought into use, and at least another dozen would have been used had they been accessible The patient, already anæmic, lost considerable blood during the operation, and after all vessels were ligated and the wound sutured, and as the dressings were to be applied, she passed into a condition of collapse, with rapid almost imperceptible pulse, dilated pupils, and extremely pallid countenance The operator at once had the patient's head lowered and the lower extremities elevated, and at the same time injected ether hypodermatically As

the heart did not respond he at once prepared for saline intravenous infundation A saline solution 6 1000, temperature of the blood, was used The median basilic vein was exposed, opened and a glass tube, connected with a rubber tube and an ordinary glass funnel, was introduced into the vein and tied firmly with a ligature The fluid was allowed to flow very slowly, and a little more than a litre was introduced before the contractions of the heart became firmer and the pulse fuller When this was done the pupils contracted, the patient became conscious and the operation was suspended The dressing was now applied, and the patient put to bed with the head low and artificial heat about the periphery of of the body An hour later the patient was conscious, the pulse still rapid but with a fair volume Under such circumstances a man's courage is put to the severest test, but Kocher did not show the least excitement, and performed the transfusion as deliberately as though he was demonstrating the operation before his class on a cadaver The day after the operation I examined the case with Kocher, and though the pulse still remained rapid, all other indications were favorable, and it is more than likely that this patient, snatched from almost certain death by prompt treatment, will ultimately recover

Immediately after this patient left the operating room a boy 14 years old was brought in suffering with tubercular synovitis of the left elbow joint Kocher has also had an unusual experience with excision of the elbow One of his assistants has collected all of his cases of excision of the elbow-joint, some 100 in number, and will in the near future publish the results in one of the medical journals Kocher always makes a longitudinal incision over the centre of the olecranon process, and joins this with a shorter one at a right angle in the direction of the radio-humeral joint, so as to have full access to the joint The insertion of the triceps muscle is preserved by keeping close to the bone in separating the soft tissues from the olecranon process The capsule is thoroughly extirpated, and as much of the bone with forceps and sharp spoon as is necessary, preserving in the case of children, whenever practicable, the epiphyseal cartilage In this case a small detached sequestrum was found in the trochlea, showing conclusively that the disease began in the humerus All small vessels were secured as they were divided, and the dressing was applied before the Esmarch's constrictor was removed No splint was used as the copious dressing and careful bandaging secured adequate immobility in proper position for the resected joint

The third case was an arthrectomy for primary tuberculosis of the synovial membrane of the knee joint in an adult female The usual horse shoe incision was made, but this was joined by another incision extending along the inner margin of the patella The cutaneous flaps were dissected back, and the bulging capsule of the joint came into view The capsule was incised from one side, and a longitudinal incision dividing the capsule on the opposite side of the patella enabled the operator to dislocate this bone to either side, thus rendering the joint well accessible in all its remote corners after it was partially dislocated by forcible flexion of the leg The greatest care was taken to remove every particle of the diseased capsule with knife and scissors, and where these were inapplicable the sharp spoon was vigorously used After the joint was thoroughly cleared the patella was placed in its proper position, two openings made on either side for drainage, the wounds sutured, a copious dressing applied, and the limb placed upon an interrupted posterior splint with foot board

Thus ended the eventful forenoon I gladly accepted an invitation to dinner sent by Mrs Kocher to the hospital After a substantial and elegant meal we rested for several hours in the beautiful garden behind the house, and the mental feast that awaited us here, if anything, surpassed our bodily enjoyment Kocher has a small laboratory in the Pathological Institute in charge of Dr Cavel, his private assistant, who has done some excellent work here

Cavel has been studying in a systematic manner the diagnostic value of implantations of tubercular material in animals, mainly guinea pigs Granulation tissue from tubercular joints invariably produces acute, diffuse tuberculosis, and death in from 5 to 6 weeks The course of the disease in the animal is typical at the point of inoculation a hard nodule appears first, the result of traumatic response on the part of the tissues around the graft Next a lymphatic gland becomes enlarged in the immediate vicinity of the inoculation, which is done in the flank, consequently the glands in the groin enlarge first Often a whole chain of lymphatic glands can be felt in the groin At a later stage the glands in the axilla become affected At the post-mortem examination it is always found that of the internal organs the spleen becomes affected first, then the liver and lungs, but usually the disease is so diffuse that scarcely an organ remains exempt When the diagnosis cannot be made between tuberculosis and syphilis, either clinically or by the microscope, inoculation always decides the matter When the lesion is tubercular the animal always becomes tubercular and dies When it is syphilis the inoculation is harmless and the animal remains well I examined a number of the animals and satisfied myself of the truth of these assertions So far only one animal that was inoculated with tubercular matter has lived for 5 months, and in this case a large abscess formed at the point of inoculation a few weeks after the operation Examination of the contents of the abscess showed abundant bacilli tuberculosis A gland in the groin remains enlarged, and the disease, if not arrested by the suppurative inflammation, may have become latent

I reached Geneva just in time, as the evening I arrived Professor Julliard sent me word that he would enucleate a struma at 9 A M the following morning I met the genial and courteous Professor at the appointed time in the Hopital Cantonal, and I saw the case he was going to operate on The patient was a young man with a very short thick neck, and suffering a good deal from dyspnœa from a retro-

sternal struma Externally the swelling could hardly be seen except when the head was thrown back, in this position a soft swelling could be felt just above the manubrium sterni About 21 students, including 3 females, had gathered in the amphitheatre to see the operation

The operation was begun without an anæsthetic, but the patient was so restless and noisy that chloroform had to be given An incision was made in the median line of the neck and carried as far as the sternum, this exposed a number of very large veins, which were isolated with the operator's own curved forceps, and divided between two ligatures The muscles over the tumor were partly cut and partly separated As soon as the capsule of the tumor was reached enucleation was begun by a blunt curved scissors and the finger During these manipulations the cyst was ruptured, and the empty sac was drawn forwards and carefully separated A number of the bleeding points required ligation The cyst seemed to spring from the isthmus of the gland After the cyst was removed two more tumors were felt embedded in the right lobe of the gland, these were removed through an incision along the anterior border of the sterno cleido-mastoid muscle in a similar manner The bleeding, especially from the cut and torn surface of the gland, was quite profuse, and required many ligatures for its arrest The wounds were dusted with iodoform, drained, and the edges sutured together The suturing was done with a large curved needle fixed in a handle which is passed through the tissues on both sides and then threaded by an assistant That the assistant did not always hit the eye of the needle with his thread of catgut as unerringly as the operator expected and demanded was not the fault of the assistant, but of the needle Juillard ought to deposit this needle in one of the antiquity shops of Geneva, and some enterprising Hebrew would find for it ready buyers who would cherish it as a relic of Pompeii or some other ancient and defunct city The dressing that the wound received deserves mention It was first covered with protective silk, next by half a dozen large sponges previously made aseptic by being kept in carbolized water, next came a compress of gauze large enough to cover the head and half of the chest, this was again covered by absorbent cotton, and lastly ordinary cotton to fill up spaces, and the last layer was impermeable paper All these things were retained with gauze rollers, and lastly a rubber bandage When the whole thing was done the patient looked like an Egyptian mummy

The spray is still used in this clinic, and carbolic acid is preferred for an antiseptic solution Juillard has the best collection of instruments I have ever seen in a hospital, and when I called later at his house I admired his own private collection, which is not as large, but very select He has also quite a large library, and from the way in which pamphlets were kept and books arranged he keeps his library for useful rather than ornamental purposes I think he is a diligent reader His contributions to literature have been many and valuable His wards contain 120 beds, but during the summer months, from the latter part of April to October, the patients live in tents and have the full benefit of open country air Each tent or barrack has room for about 20 patients During this time the rooms in the hospital remain vacant, and can be thoroughly prepared for the next winter I think this plan should be more generally adopted, as it does not involve much expense Juillard told me that all the tents did not cost over 6000 francs

And now I am at the terminus of my journey, and will begin to retrace my steps to-morrow I am perfectly satisfied with the results of my trip, as it has afforded me an opportunity to complete a part of my education which could have been done in no other way I have seen many things, good and bad We often learn as much by looking at the shady as the sunny side I have accumulated enough material to keep my thoughts busy not only for months but for years N SENN

DOMESTIC CORRESPONDENCE

THE BURTON CASE

Dear Sir —In THE JOURNAL of September 3, the paper of Dr W T Parker is mainly devoted to discussing the question whether the two bullet wounds described could have been self-inflicted, and if they were, which was first in point of time? In regard to the last question the consensus of opinion seems almost unanimous in favor of the position that the heart wound would be so instantaneously fatal as to preclude the idea of that being the primary injury

As the only method of determining such a question is by the observation of the results of similar injuries, under conditions favorable for watching the entire process, it follows that any fact so observed, bearing directly on the issue, will possess a certain value, possibly sufficient to warrant its record This consideration must therefore be the apology for a brief narrative of a case recently within the cognizance of the writer

During a quarrel in a saloon one of the parties, a young man, was stabbed in the breast with a broad bladed dirk knife, which penetrated the right ventricle, making a transverse wound one inch linear measurement in extent After being struck the wounded man ran out of the door along a platform in front of the building, jumping to the ground a distance of 3 or 4 feet and continuing to run till he reached his boat, drawn up on the beach and distant from the saloon about 100 feet As he endeavored to push the boat into the water he fell unconscious His comrades lifted him into the boat and rowed to the opposite shore, a distance of 35 rods He was lifted out of the boat and carried a few rods and laid upon the ground He was still unconscious, but having been made to swallow a little brandy, he aroused into partial consciousness, and attempting to rise, fell back dead He lived after the receipt of this injury not less than 25 minutes, and would have lived longer had he been let alone There can be no doubt that this man retained consciousness and physical strength

after he was stabbed for a period of time sufficient to have emptied the contents of one pistol at least

This case, therefore, so far as it has any relevancy to the questions propounded by Dr Parker, corroborates the dictum of Prof D H Agnew Very truly,

ARTHUR YOUNG, M D

Prescott, Wis , September 6 1887

COCAINE SOLUTIONS

Dear Sir —When I first began the use of cocaine my plan was to have 6 or 8 ounces of a 4 per cent solution prepared and keep it in my office, applying when necessary, until it was exhausted I soon began to notice that at times its effect would be perfect, at other times seriously disappointing On one occasion a patient came in for the introduction of a bougie I injected a small quantity of the solution (which was the last of my bottle) into the urethra, retaining it some minutes, and then carefully introduced the instrument He complained of great pain, feeling no relief from the cocaine Two days later he returned for the same operation In the meantime my bottle had been replenished with a *fresh* solution, which I injected as before, when I introduced the instrument, without pain, the patient expressing himself as not feeling it at all I began to reflect Why should cocaine fail at one time and succeed at another? I could see no difference in the two operations except one was with a fresh solution, the other perhaps ten days old After this, in order to test the matter, I made a number of experiments on different cases, and was so thoroughly satisfied that I no longer keep the solution on hand, but instead the crystal muriate of cocaine, and prepare my solutions for each case, often without making an exact per cent, but simply mixing with a little water without weighing

The results of these experiments may be summed up as follows

1 Solutions of cocaine, even though admixed with boracic acid, gradually lose their anæsthetic powers

2 Freshly made solutions, applied immediately, will never fail to give the most satisfactory results

3 When freshly prepared, much weaker solutions will be needed than when kept on hand A 2 per cent strength is as effectual (when fresh) as a 4 per cent two or three weeks old

4 Fresh solutions are not productive of destructive inflammation to the eye, as has been attributed by some to older solutions

It would probably be well to state, in conclusion, that in these experiments, its use has been chiefly confined to the male urethra I always increase the strength of the solution in proportion to the pain to be produced If a sensitive stricture is to be cut I use a strength of from 10 to 20 per cent , if an examination is to be made or a bougie introduced a 2 to 4 per cent answers every purpose

W F GLENN, M D

Nashville, Tenn , August 29, 1887

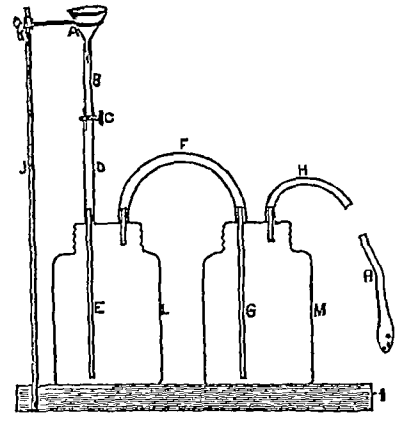
NEW INSTRUMENTS.

APPARATUS FOR GASEOUS INJECTIONS

BY M E CONNELL, M D ,

PHYSICIAN TO THE MILWAUKEE COUNTY HOSPITAL

This apparatus does away with the gas reservoir or rubber bag It can be extemporized very quickly and cheaply by any physician possessed of two fruit jars, a small piece of rubber tubing, a hard rubber cock and a glass funnel I prefer it to the original apparatus To physicians remote from instrument shops it may prove useful



Solution X—is composed of	
Sulphuric acid c p	7 ozs
Water	2 pts
Solution Y—is composed of	
Sodium bicarbonate	1 oz
Water	4 ozs
Solution Z— is composed of	
Calcium sulphide	5 grs
Sodium chloride	5 grs
Water	22 ozs

Two ounces (2 ozs) of sol x is allowed to drop slowly (through A) into sol y (in L), when carbonic acid gas is generated, which passes through sol z (in M), and in combination with sulphuretted hydrogen is conveyed to the rectum through the tube H

BOOK REVIEWS.

LEITFADEN ZUR ANTISEPTISCHEN WUNDBEHANDLUNG, mit Rucksicht auf ihren gegenwartigen Standpunkt Von GEHEIMRATH VON NUSSBAUM in Munchen Funfte, ganzlich umgearbeitete Auflage 8vo , pp xx, 308 Stuttgart Verlag von Ferdinand Enke 1887

GUIDE TO THE ANTISEPTIC TREATMENT OF WOUNDS By GEHEIMRATH VON NUSSBAUM Fifth, completely revised edition Stuttgart Ferdinand Enke 1887 Chicago Koelling, Klappenbach & Kenkel

Our readers will remember that in a very recent letter Dr Senn said that this book had done "more towards the general adoption of antiseptic principles in the treatment of wounds than all the rest of the German literature combined " That it is appreciated outside of Germany is proved by the fact that

it has been translated into five languages, and the number of editions—five—shows that it is thoroughly appreciated at home In 1880 the author said, in a lecture, that a physician who ignored antisepsis and had a patient die of pyæmia deserved to be mulct in damages—and for this he was roundly abused at the time His statement is still more true to day

On account of the conciseness of this book, it would be difficult to do more than give a synopsis of the table of contents in the space at our command The volume opens with an introduction on the present standpoint of wound treatment, which is followed by a chapter on "Infection, Intoxication (Fibrin Ferment, Fat Embolism)," of 17 pages The third chapter, on "Accidental Wound Diseases," occupies 21 pages, and treats of Inflammation and Suppuration, Erysipelas, Diphtheria, Hospital Gangrene, Sepsis, Septicæmia, Ichoræmia, Pyæmia, and Pyosepthæmia The fourth chapter is devoted to a consideration of the *Precautions against Infection of Wounds—the most important Part of the Treatment*, and one who thinks that he knows all about antiseptics and antiseptic dressings and materials should read it—and find that he is mistaken

Apparently on the principle that example is better than precept, the author shows the reader, as clear as may be with words, a number of *Examples of Antiseptic Operations* in a chapter of 32 pages These examples are an operation for multilocular ovarian cyst, the record of which occupies 14 pages, amputation for crushed knee, osteotomy by MacEwen's method for genu valgum, and an antiseptic operation in the country, complicated luxation of humerus, resection of head of humerus Other examples are also given in the chapter on "Antiseptic Dressings" wound of the head, hare lip, operations for trigeminal neuralgia, for struma, for wound of the neck, involving the trachea and œsophagus, for cavernous tumor over the clavicle, for chest wound and empyema, for cancer of the breast, for penetrating wound of the abdomen, for pelvic phlegmon, for varicose ulcer of the leg, incarcerated hernia, cancer of the rectum, cancer of the uterus and vagina, compound fracture of the legs, old fracture of the patella, treated by suture, operation for club foot, nerve-stretching for neuritis ascendens, dressing for burn of the chest, and description of the treatment of fungous inflammation of joints by the spoon

The most wonderful thing about this book is the immense amount of information that has been put into it Could all authors imitate the style of Prof Nussbaum we would have more valuable books, and fewer pages Certainly we have but one book in our language, on a similar subject, which can be at all compared with it—Stephen Smith's "Operative Surgery"

MISCELLANEOUS.

POISONOUS HAM.—Recently at Carlisle, England, several persons were seized with dangerous symptoms of poisoning after eating some of an apparently good ham Dr Philip has from the ingesta in some of these cases obtained fairly pure extracts, and their physiological effects have been studied in frogs and in the human subject The results of these experiments indicated that a poison of some potency had been present The poison was not detected by the ordinary methods of analysis, and some of its features suggested relationship with the group of bodies relatively grouped as ptomaines or cadaveric alkaloids It was probably traceable to some form of fermentation which, in turn, possibly depended on certain organisms which were discovered in the foods examined The ascertained presence of such bodies gives important indications of treatment With regard to the organisms which had been discovered in portions of the ham in question, certain preliminary difficulties had presented themselves in the process of staining, as probably some of the ingredients used in the process of curing prevented the tissues from receiving the stain so readily as usual When sufficiently exposed the sections were found to contain micrococci These were in groups both at the edge of the section and between the muscular bundles They appeared to bear close relation to the tissues The organisms were quite different from those usually discoverable in tainted ham From their reaction with staining solutions, it was likely that the organisms had obtained access to the ham after it was cooked, and it is suggested that the condition of the cellar in which the hams had been kept subsequent to cooking affords a possible explanation of their appearance

LONDON SCHOOL OF MEDICINE FOR WOMEN.—After being remodeled and extended, the London School of Medicine for Women has had a most successful session The older portion of the school comprises a dissecting room, physiological and chemical laboratories, an excellent library, there is also a small but valuable anatomical and pathological museum, the latter containing an important collection of gynecological preparations Students do not reside at the school, but for such as require it there is a hall of residence in connection with it, superintended by a committee The only conspicuous lack of this rising young institution is a hospital of its own for the clinical instruction of its students For the first three months of its existence this was a very formidable difficulty A hospital of 150 beds or upwards is absolutely indispensable for a complete medical course, and for three years not a single institution in London would admit female students In 1877, however, the Royal Free Hospital, not very far from the school, opened its wards Still there remained another drawback, no English Board of Examiners would admit them to its examinations They could take Continental diplomas, and those of King and Queen's College of Physicians of Dublin, but not a single Board would in England admit them until in June, 1877, the London University decided that women should thenceforth be permitted to present themselves for examination for degrees There are now between 60 and 70 students at the school, and a complete list shows that at the present time there are 55 registered medical women, all duly qualified medical practitioners

THE SUBSCRIPTIONS TO THE COMMEMORATIVE MEDAL of the Ninth International Medical Congress have proved nearly sufficient to cover the necessary expenses of engraving the die, striking the medal, furnishing a proper case, and mailing the completed medal to the subscribers That all members of the Congress, however, may have an opportunity of possessing this memento, those who have not subscribed can yet do so any time within this month by forwarding the cost, $5 00, to Dr J M Toner, 615 Louisiana Ave, Washington, D C

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM SEPTEMBER 3 1887, TO SEPTEMBER 9, 1887

Major C C Byrne, Surgeon, detailed as a member of the Army Retiring Board in Washington City, vice Capt Washington Matthews, Asst Surgeon, relieved Par 2, S O 208, A G O, September 7, 1887

Major R M O'Reilly, Surgeon, U S Army, ordered to proceed to Ft Niagara, N Y, on public business, and upon completion thereof, to return to his proper station, Washington, D C Par 10, S O 205, A G O, September 3, 1887

First Lieut W B Banister, Asst Surgeon, granted leave of absence for one month, with permission to apply for extension of one month, to take effect upon arrival at Ft Lowell of Asst Surgeon J B Girard Par 4, S O 91, Hdqrs. Dept of Ariz, August 29, 1887

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PUBLISHED WEEKLY

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SYNOPSIS OF THE SECOND HUNDRED CASES OF STRICTURE OF THE URETHRA TREATED BY ELECTROLYSIS WITH CASES

Read in the Section on Surgery, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887,

BY ROBERT NEWMAN, M D, OF NEW YORK

TABULAR STATISTICS

No	Patients Initials Residence Date of First Visit	Age	Cause Duration Complications of Stricture	No of Strictures found	Distance from Meatus Inches.	Size of Stric Fr Scale	TREATMENT: How many Séances	TREATMENT: Average intervals Days	TREATMENT: Time of	Sequel and calibre of Urethra when Discharged French Scale No	Last Heard From	Time of observation after Discharge
101	A R, Hartford February, 1882	25	Subacute urethritis gleet 2 years	3	2½ 4¼, 6	18 15 6	6	10	10 weeks	Endoscope used for granulations Urethra No 28	Aug, '84 re examined with No 28 no relapse	2½ years
102	A W New York April 1882	76	Inflammat ns of urethra bladder hæmaturia 30 years	2	5½ 8	Nil	8	9	3 months	Improved to 25	Not heard from	None
103	G A D N Y May, 1882	42	Gleet spasm venereal excesses 7 yrs	1	7	17	3	8	1 month	Improved to 24	May '85 keeps tolable well with ven excesses	3 years
104	E S Newark June 1882	25	Gonorrhœa, gleet 9 months	2	3½ 7	20	4	8	3¼ months inc endoscope	Ure enlarged to 27	Aug 25, 1885 well	3 years
105	S M Dayton O July 6 1882	39	Traumatism, perineal abscess incontinence 20 years	1	6	Nil	5	5	26 days	Enlarged to 23 has control of bladder and is content	Sept 25 passes 23 sound himself well	3 years
106	E T S, Jacksonv'e Fla, Aug 1882	45	Gleet prostatitis granulatn s 5 yrs	2	3 7½	15	2	4	2 weeks	Improved 23 feels well	1886 well	4 years
107	C S, Ogdensburg August 1882	51	Gonorrhœa excesses 13 years	2	3½, 5½	17	4	12	2 months	Is well 28	Reexamined 28, Sept, 1886	4 years
108	M S N Y City, Sept 26 1882	46	Gonnorrhœa, 11 yrs	4	2 3 4¼ 5½	20	5	14	4 months	Well 26	Repeated reéxaminations 26	4½ years
109	A J N Scranton Sept, 1882	42	Strong injections prostatorrhœa, 20 years	2	5 6	18	5	Long-		Pleased with calibre 25, don t care about prostate	Well in 1884	2 years
110	Dr C T Augusta Sept, 1882	27	Gonorrh a low state of health necrosis	2	3 6½	18	4	4	20 days	Is well 26	Reexamined 26 April 21 1886	4 years
111	Dr D B Long Island Oct, 1882	59	Gonorrhœa 26 yrs	6	1½ 2¼ 4¼ 5 5¾ 7	14 11 0	9	Irregular	5 months	Well, 28 Prostatic enl m t in '84 Treat m t & again passed 28	Was well, died of pneum 1886	4 years
112	A M B Bayonne, Oct 17 1882	43	Gonorrhœa impotence 15 years	4	3½ 5 6½ 8	7	6	10	2 months	Feels well 23 has gained flesh and is cured of impotence	Dr Fields reports pat well to 1887	4½ years
113	J O N Y City, Nov 1882	61	Gonorrhœa hæmaturia 20 years	3	5 6½ 8	Guide filiform	5 3	Irregular 1 year later		Was content with 23 Is blind neglected came under treatm t again 1 year after	Remained well until his death in 1885	3 years
114	B L New York Nov 1882	44	Gonorrhœa gouty diathesis 5 years	2	2½ 4½	12	4	Irregular	6 months	Well 24	Seen often to date 1887	5 years
115	S T New York Nov 1882	62	Gonorrhœa retention 20 years	5	3¼ 4½ 6¼ 7, 8	11 9 0	5	9	2 months	Is well 23	Not heard from	
116	T H N Y City, Jan 1883	42	Successive gonorrhœa 19 years	2	4½, 7	11	8	20	6 mos irregular	Cured to 26 Re examined in 84 & '85 always with No 26	Was well until his death in '86	3 years
117	H T E Vermont Jan, 1883	32	Masturbation impotence 4 years	2	1½ 4¼	17 13	5	8	6 weeks	Calib enlarged, 28	Not heard from	
118	M A, Philadelphia Feb 1883	35	Strong injections prolonged urethritis 8 years	2	3¾ 5¼	15	5	14	2½ months	Enlarged, 22 pat. refused more treatment, feeling well enough	Reexamin Feb 9 1885 not the slightest contr'ction	2 years

No	Patients' Initials, Residence, Date of First Visit	Age	Cause Duration, Complications of Stricture	No of Strictures found	Distance from Meatus Inches	Size Strict, Fr Scale	TREATMENT How Many Séances	Average intervals Days	Time of	Sequel and Calibre of Urethra when Discharged French Scale No	Last Heard From	Time of observation after Discharge.
119	C J S, N Y City, Feb, 1883	34	Gonorrhœa, alcoholism, orchitis, 10 years	3	4¼, 6, 8	0	Irreg acc't quent	ular, of fre sprees	-	Dilated to 25, feels well enough, does not come for further treatment	In '86 kept well and inebriate	3 years
120	W A, New Haven, Feb, 1883	36	Traumatism, 9 yrs	2	4, 6¼	0	3	4	½ month	Enlarged to 21 did not return	Family physici'n reports him well in 1886	3 years
121	I W, N Y City, March, 1883	47	Gonorrhœa, 21 yrs	3	1, 3, 5¼	20 0	5	7, also endo scope	2 months	Enlarged to 25 Is well	Not heard from	
122	G T B, U S A, April 7, 1883	30	Gonorrhœa, masturbation, 9 years	1	6	20	6 also ext. gal vanism	12	3 months	Well 28	Re exam April 25, '85, no rel'pse	2 years
123	A E A, Columbus, O, April 19, 1883	31	Strong injections, 5 years	3	2¼, 4¼, 6	17	4	12	1 month	Well 28	Not heard from.	
124	P H, New York, May 10, 1883	41	Gonorrhœa strong injections, 16 yrs	3	4, 5¼, 7	14	6	10	2 months	Enlarged to 25	Re exam Aug 15, '85 well 28	2 years
125	R H W, N Y City, May 10, '83	35	Gonorrhœa, catarrh, 6 years	2	3, 5½	18	5	7	1½ months	Well, to 28	Re exam May 10, '85 well 25	2 years
126	E G, Bayonne, May 17, 1883	30	Gonorrhœa, pyelitis, 3 years	2	2¼, 6¼	16	5	7	1½ months	Well, to 26	Re ex May 23, 1885, no relapse, No 26	2 years
127	H C M Clevel'd, June 5 1883	40	Gonorrhœa, cystitis, 15 years	3	¼ ½	14	2	4	In Clevel'd discont'd tr'tment	Enlarged to 20, failure for good reasons cause, 1	Sept, 1883, his Bacho and Ventrices of Electro other unskilled	excesses in ery 2 Cica lysis from operators
128	E B, Brooklyn, July 31, 1883	38	Urethritis, urethrotomy, 3 years	3	3 5 6	12 9	8	15	4 months	Well, to No 28	Not heard from	
129	H A B, N Y City, Sept 19, 1883	52	Gleet granular urethritis, 14 years	3	1, 3, 5	14	7	15	4 months, endoscope	Well, to No 26	Was well until his sudden de'th in 1885	2 years
130	T E Y, Bayonne, Nov 11, 1883	19	Masturbation, 3 yrs	2	4, 6¼	14	6	Irregular	4 months	Enlarged to No 27	Sept. 26, re ex, 27, no relapse	3 years
131	J W, N Y City Nov 16 1883	50	Gonorrhœa retention, 5 years	3	1, 4, 0	12 0	3	30	3 months	Improved to No 17 Discontinued	Not heard from	
132	J I H, Brooklyn Dec 8, 1883	36	Gonorrhœa cystitis 18 years	2	2¼, 4½	11	9	16	4 months	Well, No 28	Meet him often Is well	
133	S J H, Brooklyn, Feb 14, 1884		Not known pyelitis suspected, 2½ yrs	2	3½, 5¼	14	5	11	2 months	Enlarged to No 26	Not heard from	
134	C M G, N Y City, March 9 1883	53	Gleet excesses, 5 years	2	3, 6½	18	4	5	1 month	Enlarged to No 25	Not heard from	
135	F A E, New York, March 13, 1884	26	Gleet, 6 years	2	3, 5½	18	7	6	2 mos, also endoscope	Well, No 28	Gone to China	
136	N B H, Pa, Mar 16, 1884	30	Gonorrhœa, 2 years	2	2½ 5½	23	2	3	4 days	Enlarged to No 26	Report'd so well that he did *not* return	1 year
137	A C L, Brooklyn, March 16, 1884	28	Strong injections, 4 years	3	3, 5¼, 7	18	0	15	3 months	Enlarged to 25	1886, we'l re ex. Aug 25, 1885	2 years
138	A N, N Y City March, 1884 2 years later, Sept 5, 1886	48	Traumatism, gonorrhœa, 21 years *	3 3	2½, 3¼ 1, 2½, 3¼	0 20	2 6	20 11	2 months	Enlarged to 14, then disappeared Imp to 28, re examined May, 1887, 28	Still under observation	
139	Dr J D K, Conn, March, 1884	40	Traumatism, urethritis, 4 years	2	2, 5½	17	5	30	Irregular for 5 months	Well, No 28	Re ex, 28, well to 1887	3 years
140	Dr W T, New Y April 1, 1884	39	Traumatism, excesses, 9 years	1	8¼	25	8	20	6 mos, irregular	Well, No 32	Re ex., 32 well to date, 1887	3 years
141	T H N Y City April, 1884		Gonorrhœa, 3 years	1	3	17	2	8	10 days	Enlarged to 25	Not heard from	
142	J M, April, 1884, Nov, 1886	35	Gonorrhœa, 10 yrs, 2½ years later	4	1½, 4, 5½, 6¼, 4	11, 6 17	4 6	15 15	2 months 3 months	Enlarg'd to 23, when he went traveling as a minstrel Imp'd	Went to England, 1887	
143	T W S, New York, April, 1884	42	Strong injections, gleet, 7 years	2	2½, 5½	18	4	9	1 month	Well, No 28	Well to date, '87	3 years.
144	W G, New York, May 15, 1884	36	Not known	2	5¼, 7	21	4	15	2 mos, also endoscope	Well, No 26	Family physic'n reports him well June, 1886	2 years.
145	T T, Westerly, R I, May 21, 1884	34	Gleet, 5 years	2	5, 7	11	5		In 1 year irregular attendance	Well, No 26	Well No 26, re ex April 30, '87	3 years.
146	J P, N Y City, July 6, 1884	23	Constant discharge, 1 year	1	4¾	21	3	10	1 month	Well, No 25	Not heard from	
147	O G, N Y City, July 6, 1884	24	Gonorrhœa, hæmorrhage from dilatation, 2 years	1	5¾	20	3	6	8 days	Well, No 30	By letter from Germany Well	2½ years

*His family physician performed internal urethrotomy to No 30, which proved a failure

No	Patients' Initials, Residence Date of First Visit	Age	Cause Duration Complications of Stricture	No of Strictures found	Distance from Meatus Inches	Size Strict, Fr Scale	TREATMENT How many Séances	Average intervals Days	Time of	Sequel and Calibre of Urethra when Discharged French Scale No	Last Heard From	Time of observation after Discharge
148	J W N Y City, July 28 1884	32	Gonorrhœa orchitis, 2 years	4	Meatu 4 5, 6	11	6	9	2½ months, endoscope	Well No 28	Re ex Oct 6 1885, well, 28	1 year
149	J C N, Meridan Ct Aug 23 1884	62	Traumatism retention, 9 years	3	5 6, 7	6	4	10	1½ months	Comfortable, 17, patient did not return		
150	Dr B T B Phila Sept 17 1884	45	No record	2	3½, 7	9	6	Long, irreg'r		*Feb, 1885, No 25* well	*Remained* well until his death of typhoid fever	1 year
151	A G New York Sept. 1884	22	Traumatism, prostatorrhœa 4 years	1	3½	18	2	30	1 month	Comfortable 26	Well 1885	1 year
152	C A T, Cincinnati Oct. 1884	26	Gonorrhœa 2 yrs	1	3	12	6	7	1½ months	Well, 28	Not heard from	
153	E C Penn Yan Nov 23 1884	70	Gleet 12 years	2	3½, 5	12	5	7	1 month	*Feels well, 25*	*Not heard from*	
154	H A D New York Dec 28 1884	36	Gonorrhœa, gleet cystitis syphilis urethral fistula 2 in from meatus, 5 years	3	2¼, 4¾ 6	17	6	10	2½ months	Well 28	May 6 1886, re-exam, 28, well	1 year
155	G M New York March 28 1885	47	No record	3	3 3½ 5	14	5	11	2½ months, endoscope	Well, 28	Well Mar, '86	1 year
156	R H Watertown April 22 1885	55	Paralysis of bladder for 10 years	1	1	13	4	3	10 days	Improved, 24, had to go home	May '86 did not return felt well enough	1 year
157	J V, Seaman Apr 22 1885	32	Gleet 10 years	3	2⅞ 4¼ 6¼	16 11	5	7	1 month	Well, 26	Went to sea not heard from	
158	J T Captain May 4 1885	28	Strong inject'ns urethrotomy 3 times 4 years	2	2¼, 5¼	15	4	10	2 months	Well, 28	Sept, '86, well, *re ex, 28* went home to Spain	1½ years
159	G W B New York May 7 1885	27	Too strong current *of electricity*, urethrotomy, 2 years	3	1¼ 3, 5¼	12	6	9	2 months	Well pleased 26	Not heard from	
160	R M T Florida May 28 1885	43	Gonorrhœa orchitis syphilis 8 years	3	1¼ 3½, 6½	18	9	14	4 mos, also general treatment	Went home, No 25 1886 came back with contracted meatus	Went home Oct. 1886 well	1 year
161	S T B New York, July 7, 1885	36	Gonorrhœa cystitis 13 years	2	4½, 5¾	18	4	14	2 months	Well 25	Re exam Aug 1886 26 well	1 year
162	M R C New York, July 13, 1885	26	Gonorrhœa for yrs 6 years	3	3¼, 4½ 6	20	4	15	2 months	Well 28	Reports well, 1886	1 year
163	W R B New York July 17 1885	58	Gonorrh a urethrotomy 25 years	3	2½, 4½ 5¼	20	9	Long	Irregular 1 year	Is well 25	To date, May 1887	2 years
164	J G Albany July 21 1885	28	Masturbation 5 yrs	2	4½ 6¼	15	7	10	4 mos irregular	Better and contented 25		
165	W T D, Florida Aug 14 1885	21	Excesses and gleet 6 months	4	1½ 3½ 5 7¾	20	4	30	3 months	No trace left of stricture, 25	Re exam Sept, 1886, well	1 year
166	G B New York Sept. 1885	26	Gleet orchitis hard work	2	Meatus 4	17	4	10	1½ months	Well meatus will not admit more than a No 23	Seen often to date May, 1887 23	1½ years
167	Dr G S M Conn Sept. 17 1885	49	Prostatitis cystitis 8 years	1	2½	20	4	8	1 month	Married & well 26	Sept, 1886, reports well	1 year
168	P E N Y City Oct 11 1885	38	Strong inject'ns can*not pass water vol*untarily 2 years	Whole ur cl ed	0	0	8	8	2 months	Calibre enlarged to 25	Nov, '86 heard he is well	1 year
169	J B S N Y Oct. 9 1885 re appeared March 13 1887	50	Gonorrh a urethrotomy retention 6 years	6	1½ 2½ 3½ 5 7½, 8	17 0	9 6	9 9	*3½ months* 2 months	(See foot note) Feels well, 25	*Still under observation*	
170	A H L New York Oct. 1885	34	Gonorrhœa, gleet 5 years	2	3½, 6	18	6	12	3 mos also endoscope	Stricture well 28 but gleet not cured	Not heard from	
171	T W E, R I Oct. 25 1885	28	Gonorrhœa cystitis prostatitis 7 yrs	3	1¼ 3¼ 6¼	25 18	4	11	1½ months	Enlarged easy, 32	Not heard from	
172	A P S New York, Oct 25 1885	29	Gonorrhœa cystitis hæmaturia 3 yrs	2	4 7½	17	4	7	1 month	Well 28	Re ex 87 Jan. 29 well 28	1¼ years
173	C P H Wilmington Del November 15 1885	23	Strong injections orchitis urethrotomy 4 years	3	2½ 3½ 6	18	9	14	Endoscope and *other treatm t* 6 months	Very obstinate case *prolonged by his be*ing constantly on railroad Well 28	Dec 1886 well	1 year
174	J E Washington Nov 15 1885	52	Gonorrhœa hæmaturia, 1½ years	2	2¼ 5½	11 0	9	16	Called irregular 5 months	Meatus cut well 28	Re-ex well 28 May 4 1887	1 year
175	L Mc C N York City Dec 26 '85	27	Strong injections gleet 4 months	3	3¼ 5¼ 7½	18 0	4	10	1½ months	Enlarged to 23	Then went to Europe	

Case 169 Family physician after many long-continued trials could not pass any instrument and recommended perineal section He appeared at my office with retention and in great agony Comfortable 25 Patient felt too well and discontinues treatment

No	Patients' Initials, Residence, Date of First Visit	Age	Cause, Duration, Complications of Stricture	No of Strictures found	Distance from Meatus Inches	Size Strict., Fr Scale	Treatment: How many Séances	Treatment: Average intervals Days	Treatment: Time of	Sequel and Calibre of Urethra when Discharged French Scale No	Last Heard From	Time of Observation after Discharge
176	G I P, Savannah Dec, 1886	20	Strong injections, 2 years	2	5¼, 6¼	9	9	15	3 months	Well, 28	Oct., 1886, well.	1 year
177	I D, N Y City, Jan 22, 1886	56	Strong injections, prostat enlargem, complete retent'n, 26 years	3	3½, 6½, 7½	18, 0	18	11	6 months	Has full power over bladder Well, 23	Re ex., 23, Mar 1887	1 year
178	W S M, New York Feb 5, 1886	37	Gonorrh'a urethrotomy 11 years	3	3½, 5, 6½	18	5	0	1½ months	Dilated 26	Not heard from	
179	B Y C New London, Feb 4 1886	35	Urethral abscess, perineal fistulæ, over disten bladder, 6 years	2	3½, 6½	0 23	2	½		To 28 (See note)	Re exam Feb 18, 1887	1 year
180	W A A, New London, Feb 24, 1885	26	Gleet, granular urethritis, 2 years	2	1½, 5	18	6	10	Irregular 3 mos	Enlarged to 28, almost more than the normal calibre	Feb '87, family physiciam rep'ts him well	1 year
181	G T C, N Y City, March 19, 1886	24	Gonorrhœa, retention, 6 years	2	4, 5½	14	10	11	4 months	Well, 30	Seen him often, May, 1887	1 year
182	H K, New York, April 9, 1886	42	Gonorrhœa, traumatism rupture urethra 18 years	4	4 5½ 6¹, 7¼	8	11	9	4 months	Well, 28	May, 1887, is in Arkansas	6 months
183	Dr O V G Paterson, Apr 11, 1886	50	Gleet gout spasm of bladder, 26 yrs	4	2¼, 3¼, 4, 7	14 12, 0	6	8	1½ months	Very slow, imp'd 14 Gout and gen'l debility prevented his return	May, 1887 is not worse	1 year
184	G P England April 15, 1886	31	Gonorrhœa phymosis cong, 3 mos	2	4, 6¼	14 11	3	4	10 days	Imp'd to 23 Had to leave with his ship for England	Feb, 1887, well, and no relapse.	10 months
185	J L., Duchess Co, April 30, 1886	29	Gonorrhœa, syphilis, 3 years	2	2¼, 5¼	14	6	14	Calls irregular 4 mos Endosc	Well, 28	Jan, '87, physician rep'ts well	
186	G W T, Bergen N J May 11 86	2-	Gleet orchitis 2 yrs	1	5¼	18	6	7	1½ months	Well, 28	May 20 1887	1 year
187	H F, Brooklyn, May 19 1886 March 13 1887	21	Strong injections, 6 months Traumatism tear in urethra which bleeds	2 1	4, 6, 2	16 17	5 6	8 7	1½ months	Well, 23, new gonorrhœa, very stubborn, 21	Still under tre't-ment.	
188	G I, N Y City, June 18, 1886	41	Gonorrhœa retention orchitis urethrotomy 20 yrs	1	5 to 7	11 0	9	12	Treatment in interval of 4 mos by traveling	Improved to 20	Is in So America when he returns tr'tm't will be resumed	
189	D T H Newark, Aug 1 1886	49	(Never had disease) Cicatrication, after porotomy, 3 mos	1	Meatus	18	5	7	1 month	Enlarged to 27	Well, Feb, 1887	7 months
190	H W D N York Sept 17 1886	19	Gleet 6 months	1	3½	17	3	4	12 days	Well 25	Mar, 1887, well.	6 months.
191	G R., New York Oct 1 1886	33	Strong injections, cystitis, prostatitis, 4 months	2	Meatus 2½	18	4	7	1 month	Well, 28	Re ex, 28, Jan 9, 1887	3 months
192	Dr T J Pa Oct 18, 1886	31	No record 1 year	2	2½, 6	17	4	4	12 days	Well, 28	Not heard from	
193	A A S, New York Nov, 1886	52	Not certain Pyelitis hypospadias	1	6¼	25	2	15	15 days	Imp'd, 30 has symptoms of pyelitis		
194	W M, Cleveland Dec 2, 1886	45	Gonorrhœa urethrotomy, prostatitis chron, 20 years	2	5, 6½	23 20	3	3	7 days	Enlarged to No 26 went home to Cleveland		
195	T E, Norwalk Ct, Dec 10, 1886	54	Gonorrhœa, urethrotomy urine dribbles away, 25 yrs	1	7	0	5	30	Irregular attendance	Very much imp'd, 17 is easy and has full control of bladder	Discontinued treatment for cause	
196	G W W, New York Dec, 24, 1883	45	Gonorrhœa syphilis, 8 years	3	2¾, 3¾, 6¾	12	8	10	3 months	Second stricture is calcareous & yielding very slowly, 25	Still under observation	
197	F A C, N Y City, Jan 8, 1887	31	Strong injections, 5 years	1	6½	21	3	5	1½ months	Enlarged to 32	Well	
198	M V, Brooklyn, Jan 12, 1887	40	Amateur injections, acute urethritis, 1 month	1	Meatus	17	3	4	12 days	Enlarged, 23 feels well		
199	J M C, N York, Feb 16, 1887	26	Gleet, granulations, 5 years	2	5, 8	25	3	15	Endoscope, etc. 2 months	Improved, 32	Is traveling	
200	Dr R G, Jersey, Feb 26, 1887	44	Gleet, retent'n, prostatitis, granular urethritis, 2 years	2	4½, 5½	23	4	8	Endoscope 2 months	Feels well, 32	Still under observation	

Case 179 Dr Douglas, of New London, has treated the patient by electrolysis, when no instrument would pass, and improved him so that the natural course of the urethra was re established to No 23, and full power of his bladder

In presenting this report of cases of urethral strictures, treated by electrolysis and a tabular statement of a second series of 100 cases, my object is to record facts from clinical experience in private practice, and by presenting a respectable number of cases, to establish reliable statistics which as a record will assist the study of the subject and fortify the successful results obtained previously I have practised electrolysis in the treatment of urethral stricture, over 18 years, and have from time to time reported cases Many other surgeons from different parts of the world, including countries in Asia, have substantiated the good result of such treatment, so that at present we could collect easily 1,000 cases, which record should establish the value of my method But I am not aware that any other person besides myself has contributed to the statistics 200 cases from private practice The difficulty consists in this, that in order to use a case for reliable statistics, the patient must (1) have given a true history and address of himself, (2) remained under treatment a certain time, (3) followed advice and attended regularly to appointments, (4) remained under observation after being dismissed, and been accessible for further information Cases of dispensary patients, as a rule, are worthless for statistics, and even in private practice only a small percentage can be utilized for an honest record Therefore it will be seen, that it is very difficult for one practitioner to collect 100 cases for reliable statistics

No Relapse —My paper of the first 100 cases was presented to this section at the meeting in 1883— and differs somewhat from this second series One principle feature was, to show that no relapse of the malady occurred after the stricture has been cured by means of the electrolysis As the meaning of the word "cure" may be interpreted differently by some than by others, I will be more explicit by defining my meaning, viz no contraction of the calibre of the urethra takes place, and after the patient has been dismissed as well, to his own satisfaction, the same number of sound or catheter which was used the last time in treatment, would easily pass, after a year or even many years When the value of electrolysis had been proven by reported cases, and even by my article of "10 years experience, etc," some sceptics still objected, claiming that not enough time had elapsed between the treatment and the after observation To meet that objection I prepared the paper of "Tabular Statistics of 100 Cases of Urethral Stricture, Treated by Electrolysis without Relapse " These 100 cases were naturally not consecutive cases, but collected from consecutive cases for the purpose, and had to meet the following conditions

(1) The patients being under treatment regularly, and for a reasonable time, (2) that they were to be discharged as cured, or at least so improved, that the patients were content with the result, and did not wish any further treatment or improvement, (3) they were to be cases that were heard of afterwards by reliable information, mostly by re examination of the family physician or by myself Some of these patients came repeatedly for such an re examination (4) That a *reasonable* time had been allowed between the discharge when cured and the re examination, which in these cases was resp from 3 to 11 years

The proof of no relapse was, that the same number of sound was used in the re examination, which passed the last time at the close of the treatment, *i e*, if the calibre of the urethra was enlarged to a number 26 French, the same number 26 passed again after resp 3 to 11 years Some unfriendly critics jeeringly said, "it was a remarkable point in Dr Newman's cases, that they were, every one of them, successful " But these critics overlook the fact, that in the selection of these 100 cases, the first essential point was, that they were discharged as cured, in order to see whether or not a relapse would take place I have stated all these facts distinctly in my former paper, and those sceptical critics have overlooked the facts, and therefore have been unjust

Selection of Cases —The present record of the second series of 100 cases, which I have the honor to report to day is collected in a different way It consists of the experience of the latter few years, the narrative of almost consecutive cases taken from my note book, relating all such cases, which have remained long enough under treatment to warrant a result, and in which the necessary information has been furnished and recorded, on the other side omitting cases, which have not been long enough under treatment, or only seen without treatment, and in which the record is insufficient In this report I have on purpose omitted the word "cured," because there is a diversity of the meaning cure The patients were dismissed or stopped treatment themselves, when they felt comfortable and well, had a calibre of the urethra which enabled them to void freely a good large stream, and if wanted could exercise sexual intercourse

The result of such treatment is marked under the heading "sequel and calibre of the urethra when discharged " The number of the last electrode used, is stated according to the French scale

In recapitulating we find that

Strictures which admitted no instrument were enlarged from No 17 to 28 resp
Strictures which admitted a No 2 instrument were enlarged to No 23
Strictures which admitted a No 6 instrument were enlarged from No 17 to 28 resp
Strictures which admitted a No 7 instrument were enlarged to No 23
Strictures which admitted a No 8 instrument were enlarged to No 28
Strictures which admitted a No 9 instrument were enlarged from No 23 to 28 resp
Strictures which admitted a No 11 instrument were enlarged from No 26 to 28 resp
Strictures which admitted a No 12 instrument were enlarged from No 24 to 28 resp
Strictures which admitted a No 13 instrument were enlarged from No 24 to 28 resp
Strictures which admitted a No 14 instrument were enlarged from No 20 to 30 resp
Strictures which admitted a No 15 instrument were enlarged from No 22 to 28 resp
Strictures which admitted a No 16 instrument were enlarged from No 23 to 26 resp
Strictures which admitted a No 17 instrument were enlarged from No 23 to 28 resp

Strictures which admitted a No 18 instrument were enlarged from No 25 to 32 resp
Strictures which admitted a No 20 instrument were enlarged from No 25 to 30 resp
Strictures which admitted a No 21 instrument were enlarged from No 25 to 32 resp
Strictures which admitted a No 23 instrument were enlarged from No 26 to 32 resp
Strictures which admitted a No 25 instrument were enlarged from No 30 to 32 resp

The result of the enlargement of the calibre of the urethra varied according to circumstances, as necessities, wishes of the patients, time allowed for treatment, nature of the stricture, complications, general condition as occupations, vices or virtues of the patients But results must be considered very good, even by chronic grumblers, if a calibre of a urethra can be enlarged to a No 28 French, when at the first visit no instrument would pass, and experts have tried in vain before In some cases the family physician has tried for weeks, in others, celebrated professors were given chances, without being able to instrument, and the disposition of the cases the advice of perineal section In some cases advice by the family physician was accompanied a written introduction to a first class operator, tc In all such cases, when no medical hand could pass the stricture with an instrument, it was passed successfully by the power of the "electrolysis," which acted as a chemical absorbent, and not as a dilator, as some kind friends have suggested If in these cases dilatation could have been used, why did the experts and surgeons not do it? In one case mentioned in a former paper, a surgeon whose skill in using instruments is undoubted, was unable at nine trials to pass any instrument through the stricture, which a doctor in a New Jersey village, probably not as skilled in the manipulation of instruments, succeeded with electrolysis on the very next day All these are facts which can be verified by reliable witnesses, and there can be no doubt that the electrolysis did the work, which could not be done by pressure or dilatation

The duration of the strictures at the time the patients presented themselves for treatment varied from 1 month to 30 years, and in recapitulating we find

Two cases of 1 month standing, 2 cases of 3 months, 2 cases of 4 months, 4 cases of 6 months, 1 case of 9 months, 3 cases of 1 year, 10 cases of 2 years, 6 cases of 3 years, 6 cases of 4 years, 11 cases of 5 years, 6 cases of 6 years, 5 cases of 7 years, 4 cases of 8 years, 4 cases of 9 years, 4 cases of 10 years, 2 cases of 11 years, 1 case of 12 years, 2 cases of 13 years, 1 case of 14 years, 2 cases of 15 years, 1 case of 16 years, 2 cases of 18 years, 1 case of 19 years, 7 cases of 20 years, 2 cases of 21 years, 2 cases of 25 years, 2 cases of 26 years, 1 case of 30 years, 4 not known

To make the recapitulation of the different points in these cases more interesting, we will now compare both series of 100 cases What was the percentage of single to multiple strictures?

In the *first* series of 100 cases we find 42 single and 58 multiple strictures with a total of 189 strictures In the *second* series of 100 cases we have only 21 single, 79 multiple, with a total of 230 strictures

There is a striking difference between the two series, and it seems that the average appearance is more correctly given by the first figures, so that we may expect nearly one-half of patients presenting themselves, having single strictures The increase of multiple strictures in the report of last years, may arise from the fact, that more bad cases were transferred to me The number of strictures in one individual we find as follows

	First 100	Second 100	Average in 200
1 stricture in	42	21	31½ cases
2 strictures in	34	43	38½ "
3 " "	17	26	21½ "
4 " "	5	7	6 "
5 " "	2	1	1½ "
6 " "	0	2	1 case

The location of the strictures was found in all parts of the urethra, from the meatus to more than 8 inches from it, as follows

Location of Strictures in	1st 100 Cases	2d 100 Cases	Average in 200 Cases
At the meatus or less than 1 inch from meatus	8	9	8½
At 1 inch or less than 2 inches from meatus	12	12	12
At 2 inches or less than 3 inches from meatus	31	24	27
At 3 inches or less than 4 inches from meatus	29	41	33
At 4 inches or less than 5 inches from meatus	42	30	36
At 5 inches or less than 6 inches from meatus	37	46	41
At 6 inches or less than 7 inches from meatus	24	40	32
At 7 inches or less than 8 inches from meatus	0	20	10
At 8 inches or more from meatus	10	8	9

SITUATION —The greatest number of strictures were from 4 to 6 inches in the first 100 cases from 5 to 6 inches in the second 100 cases or in the first part of the urethra In the membranous part, 10 per cent, first 100, 20 per cent second 100, average in 200 cases, 15 per cent. In the *prostatic part*, 5 per cent first 100, 8 per cent. second 100, average in 200 cases, 6½ per cent

This combined statistic of 200 cases confirms the observations made at the report of the first series, that strictures appear in every portion of the urethra, about 10 per cent in the membranous, and about 5 per cent in the prostatic portion, some of the latter were of traumatic origin It seems to be a mistake, to believe that there are no strictures in the prostatic portion of the urethra, and that the largest number are situated within 3 inches from the meatus

Seances, intervals and time of treatment average exactly alike in both series reported From 1 to 10 operations, in some cases even more were necessary, from which fact one may draw the conclusion, that the average number of séances was 5 to 6 for each case The treatment in each case averaged 2 to 3 months Long intervals between the séances, and weak currents are rules to which I still adhere, and which I cannot impress too strongly on operators, as most important points in these operations The intervals ought to be once a week or more, but in case of necessity may be shortened, each séance lasted from 2 to 10 minutes, I do not like to prolongate it more, except for good reasons The electric current is from 3 to 5 milliampères of a good galvanic battery, having a steady current, which is equal to from 6 to 10 cells Precision and measurement of

the electric current are desirable, if a good galvanometer can be procured

Observations —The length of time patients were under observation after treatment differs widely in the two series, for good and natural reasons The patients recorded in the first series were under observation from 3½ to 11 years, which is an average time to from 6 to 7 years in each case I have shown above the object and result of such observations, and certainly it has been proven that during years after the treatment the calibre of the urethra, when once sufficiently enlarged, or cured if you please, did not suffer any contraction This principle or effect of the electrolysis is also proven in the second series of 100 cases, but not in such a striking degree This is most natural for several reasons These cases were all treated lately, within a few years, some remaining still under treatment or observation, therefore the record of observation could not have been longer than a few years Next the cases were not selected, but reported almost as consecutive cases, as found in the note book There is no claim, that these cases were all cured, the record speaks for itself and shows how far they were improved, or a good reason why they were not more improved Even in this series in most cases a reasonable time had elapsed for observation, and many re-examinations have shown that no contraction of the urethra had taken place These observations comprise a time between 3 months to 5 years, the largest percentage of observations were made from 1 to 3 years A small percentage of these cases were not heard from again, but as they all left off treatment, when the calibre of their urethras was resp of a No 25, 28 and 32 size French, it is presumable that they remained well, and that such was the reason of their non appearance again

For other information concerning electrolysis, I refer to my former paper, published in THE JOURNAL, April 25, 1885, and its continuation, "Tabular Statistics of 100 cases of Urethral Stricture Treated by Electrolysis," in the *New England Medical Monthly*, August, 1885 There will be found the definition of electrolysis, the theory, as also the action of the poles, practical experiments and demonstrations, the *modus operandi* and instruments used The latter are still more minutely described in my article "The Armamentarium for the Treatment of Urethral Stricture by Electrolysis, with a *resume* of the Operation," which appeared in the *Medical Register*, Philadelphia, February 19, 1887 While these details are omitted here, in order to avoid repetitions, it may be useful to give short and practical rules for the performance of the operation, as a safe guide for practitioners who wish to adopt the treatment of electrolysis in stricture of the urethra

Recapitulation of general rules

1 Any good galvanic battery will do, which has small elements and is steady in its action, the twenty-cell battery, carbon and zinc elements is an excellent instrument, and particularly sufficient for the beginner

2 The fluid for the battery ought not to be used too strong

3 Auxiliary instruments, as galvanometer, etc, are important to the expert, but not necessary for the beginner

4 For the positive pole a carbon electrode is used, covered with sponge, moistened with hot water, and held firmly against the cutaneous surface of the patient's hand, thigh or abdomen

5 For the absorption of the stricture the *negative* pole must be used

6 Electrode bougies are firm sounds insulated with a hard baked mass of rubber The extremity is a metal bulb, egg shaped, which is the acting part in contact with the structure

7 The curve of the bougie is short, large curves are mistakes

8 The plates must be immersed in the fluid before the electrodes are placed on the patient, and raised again after the electrodes have been removed

9 All operations must begin and end while the battery is at zero, increasing and decreasing the current slowly and gradually by one cell at a time, avoiding any shock to the patient

10 Before operating, the susceptibility of the patient to the electric current should be ascertained

11 The problem is to absorb the stricture, not to cauterize, burn or destroy tissues

12 *Weak currents at long* intervals

13 In most cases a current of 6 cells, or from 2½ to 5 milliampères, will do the work, but it must be regulated according to the work to be done

14 The *seances* should be at intervals not too frequent in succession

15 The best position for the patient to assume during the operation is that which is most comfortable for *himself and the operator* I prefer the erect posture, but the recumbent or others may be used

16 Anæsthetics I like to avoid, I want the patient conscious, so that he can tell how he feels

17 Force should never be used, the bougie must be guided in the most gentle way, the electricity alone must be allowed to do the work Avoid causing hæmorrhage

18 During one *seance* two electrodes in succession should never be used

19 All strictures are amenable to the treatment by electrolysis

20 Pain should never be inflicted by the use of electrolysis, therefore it should not be applied when the urethra is in an acute or even sub-acute inflammatory condition

21 The electrode should not be greased with substances which are non conductors, and would insulate

Objections —In reality there can be no valid objections to the method of electrolysis in the treatment of urethral strictures, and those which have been raised from time to time come either from men entirely ignorant of the first physical laws of electricity, or from such who had a personal interest or feeling in the matter To the latter class in the opposition belong some surgeons of high standing, who are wedded to the knife, have not tested the electrolysis, and hence are opposed to any innovation Most of such objections are entirely unfounded,

based on false theories, or are too trivial and even ludicrous to be considered Some have even the stamp of mis statements purposely made Here for instance is one, which we find in a modern text-book on surgery "Electrolysis, as a means of cauterization and dilatation recommended recently, is painful, uncertain, and liable to be followed by peri-urethral abcesses It possesses no compensating advantages which entitle it to any further notice" The author of this strong language of condemnation had no knowledge nor experience in any kind of electricity

His statement is either the consequence of ignorance or made to mislead, because he ought to know, that electrolysis is not a cauterization nor a dilatation, on the contrary I have warned always against cauterization, and stated over and over again, that electrolysis is not a dilatation, but the process of decomposing a compound body by electricity, a galvanic chemical absorption It is further false that it is painful, uncertain and liable to be followed by peri-urethral abcesses On perusal of my rules and records, it will be found that pain should never be inflicted, and that the process gives certain positive results During my large experience with urethral strictures, I never yet have seen a peri urethral abcess follow the electrolysis, and all such abcesses which have come under my observation ante dated the electrolysis And on the other hand, how cunning (which may be accidental) is the condemnation of electrolysis worded by the great surgeon, leaving a hole to creep out If he is taken to task for his sentence, he may say he condemns electrolysis only as a cauterization, but as a decomposing agent it is all right Why did he not say it? I leave it to any impartial judge, if such a sentence in a text-book does not mislead the masses instead of instructing? A man who writes a text book for instruction, ought to stand by the truth and be silent on matters he does not know

One friend objects to the treatment because it does not always cure a prostatitis or any other discharge Of course, it does not always, and discharges will only be cured if their existence is caused by the stricture, but if there are granulations, or other causes, our electrolytic treatment has nothing to do with it Some are aggrieved to hear, that to succeed, it is necessary to understand electricity and the handling of the genito-urinary instruments Now there is scarcely a profession, business, or even common labor, which can be exercised without an apprenticeship, and in any vocation expertness is needed to be useful The same objection could be raised to any operation, or even to the practice of medicine If operators, who are unskilled or careless fail in their undertakings, it does not condemn an acknowledged good operation A London surgeon does not like the long intervals between *séances*, without giving any reason for it If necessary, he may operate at shorter periods, as I have shown in the report of cases, that I have done so in intervals of 2 days My recommendation of longer intervals is made for the convenience and pleasure of the patient, who is generally made comfortable after 1 operation, and for that reason I consider long intervals rather an advantage One of my distinguished friends, who is most persistent in his opposition to my methods, argues as follows

Electrolysis is heat, heat burns, burns make cicatrices, cicatrices make every stricture worse, *ergo*, *electrolysis is no good* Now that gentlemen ought to know better, after having read my articles on the subject, and heard my explanations I distinctly advise, always practice, and insist upon weak currents of from 2½ to 5 milliampères, so that the electrolysis acts as a chemical decomposition by absorption, which *never* burns nor destroys tissues

If some gentlemen use too strong currents, or the positive instead of the negative pole, they make gross mistakes, must necessarily fail, destroy tissues, and ruin their patients If professors and others have made such mistakes and failures, it is to be lamented, but does not harm the reputation of a good method, approved by acknowledged successes all over the world in a very great number of cases

In England very good results have been reported similar to my own And there also similar objections have been raised, particularly at the discussion of the Royal Medical and Chirurgical Society, when Drs W E Steavenson and W Bruce Clark read a paper on the subject To their good results of electrolysis it was objected, that their cases were of too recent a date, and their number of cases have not reached such dimensions as to place it on record as accomplished facts These gentlemen of high standing in the profession known as experts in electricity who have done excellent good work, were then treated exactly as I was, when I had practiced the electrolysis only a comparatively short time But, when my 100 cases were alluded to, in which no relapse occurred after an observation and re examination from 3½ to 11 years, the objection then was, that such statistics were too good I have spoken of these 100 cases before, and also shown, that electrolysis is not a dilatation, on the contrary, that when dilatation and even pressure will not pass a stricture, the electrolysis will by its chemical action

Why was it advisable to use gradually larger and larger electrodes? This is a question by a gentleman, who wants thereby to prove that the enlargement of the calibre was done by pressure The answer is, that the electricity can do only a certain work in a certain time, and that it would be impossible to subject the patient to such increased work, and to such prolongated time in one *seance*, without doing great harm You may ask just as well, why do you eat 3 meals a day, and why don't you eat once a week, by taking 21 meals at once It is considered a good result to enlarge the calibre of the urethra by 3 sizes in one *séance*, and when such 3 size larger sound can not be pressed through a stricture, but yields to the action of electrolysis, while no pressure is used, it is the best proof that the electrolysis did such work and not a dilatation This I have often demonstrated Besides, how can the intelligent interrogator expect that a stricture which will only admit a No 9 sound, can be taken grip at by a large bulb like No 28? Such a large

bulb acting as the negative pole could only enter the healthy part of the urethra with its tip, act there on healthy tissue, which would do more harm, and do no good to improve the diseased part No, we want a size for the electrode, which with its tip reaches the beginning of the stricture, engages itself therein, and enlarges by means of its chemical action the calibre by degrees until it is large enough, that the electrode will pass such stricture, making it 3 sizes greater than before the operation According to the nature of the stricture, a 2 to 4 sizes larger electrode, French scale, may be used for one *seance*, and such must be considered a very good result Another eminent gentlemen finds fault, that no endoscope has been used, and that American writers have not given enough details with regard to the size, nature and position of the stricture He also described 1 case of his own as a failure No wonder he failed, because he in reality practiced electro puncture and not electrolysis, and a contraction naturally followed Neither are his objections justified, as I have in my tabular statistics, as well as in other reports of cases, always stated details, as patients' first visit, cause, duration, complication, nature, number, size and seat of stricture, etc I also have used the endoscope for 20 years, and made use of it in the treatment of strictures, when it was indicated, to gain further information I have still to hear of a valid real objection—but on the contrary can state decided advantages of the electrolysis, without wishing to enter into the merits of other methods

THE ADVANTAGES OF ELECTROLYSIS

1 Electrolysis is applicable to all strictures in any part of the urethra

2 Electrolysis will pass and enlarge any stricture, when other instruments or the skill of surgeons fail, which I have often demonstrated

3 It causes no pain or inconvenience

4 It is devoid of danger

5 It is not followed by hæmorrhage, fever, or any other unpleasant consequences

6 It relieves at once

7 The patient is not detained from attending his daily work or business, and can earn his living while under treatment without restraint

8 No relapse takes place

(To be concluded)

SYMPATHETIC OPHTHALMIA CASES IN PRACTICE

Read before the Chicago Medical Society, January 17, 1887

BY W FRANKLIN COLLMAN M D, M R C S, ENG
PROFESSOR EYE AND EAR DISEASES, CHICAGO POLICLINIC

The terrible affliction blindness is so frequently caused by an injury to the eye, which results in the destruction of its fellow, and the treatment of the injured organ places so great a responsibility upon the physician that the introduction of the subject, "Sympathetic Ophthalmia," for our mutual discussion and profit, needs no apology Several evenings and an audience could easily be exhausted in justice to the theme, but regard for yourselves and time compels a very imperfect sketch While some authors use the term *Sympathetic Ophthalmia* synonymously with Sympathetic Ophthalmitis, others use it generically to include "Sympathetic Irritation" and "Sympathetic Inflammation"

These affections are induced in the sympathizing eye by some organic lesion of its companion In the vast majority of cases the lesion in the exciting eye is an inflammation of the ciliary body and the cause of the cyclitis is usually a wound in the ciliary region—which is known as the "dangerous zone" This corresponds to a belt of the sclera 2 lines in width surrounding the cornea, and is the region from which most of the sympathetic affections of the second eye proceed Operative injuries of the ciliary body (such as von Graefe's linear extraction of cataract) are prone to give rise to sympathetic disease Becker, in 1875, collected 22 cases of sympathetic ophthalmia resulting from cataract extraction 15 followed the von Graefe operation and 19 the flap While the above illustrates the danger of the linear operation, the vast number of such extractions not followed by sympathetic disease, shows that simple, uncomplicated incision of the ciliary body is not apt to endanger the second eye It is generally held that acute purulent ophthalmitis is rarely if ever followed by sympathetic disease, yet there are exceptional cases to the contrary reported, and Alt found that of 110 eyes enucleated on account of exciting sympathy, 19 per cent had suffered from ophthalmitis Among other most frequent causes of sympathetic disease are a foreign body lodged in one eye, and the degeneration of a lost eye This is eminently dangerous, if painful or tender in the ciliary region

Sympathetic irritation of the eye is marked by certain *functional* disturbances, among which weakness of the accommodation is a very prominent and early symptom, the patient soon experiencing fatigue and pain in reading, and being disposed to hold the book at a distance The eye is sensitive to light, and readily weeps when exposed to a bright light or the strain of near work Vision may be normal, is occasionally impaired and sometimes there are temporary sensations of darkness In some cases there are neuralgic pains in the eye, and photopsies

Donders describes a sympathetic neurosis denoted by intense photophobia, lachrymation, and spasm of the lids This form of irritation, he thinks, never passes over into sympathetic inflammation Whether the usual form of sympathetic irritation is a condition, *sui generis*, or is a premonitory step of inflammation, is an open question The symptoms of irritation may exist for weeks, months, or years, and then subside or be followed by inflammation

Some authors maintain that sympathetic inflammation is always preceded by symptoms of irritation, the majority perhaps assert that inflammation may occur without such warning In my own experience symptoms of irritation have always preceded sympathetic inflammation, but the warning has often been unnoticed or little heeded by the patient In practice it would be disastrous to act as if an eye with

sympathetic irritation were not in imminent danger, or as if sympathetic inflammation could not occur without warning

Though any structure of the eye may be attacked by sympathetic inflammation, the disease most frequently and in the severest form appears as an iritis or irido cyclitis It often sets in in the less severe form of serous iritis, or as a plastic iritis, and if long continued (as it almost invariably is) extends to the ciliary body and the choroid, produces degeneration of the iris with total adhesion to the lens capsule, and wasting of the eyeball

Next to the lesions of the uveal tract those of the retina and optic nerve are the most important The route or manner by which inflammation of one eye is transmitted to the other is still only surmised McKenzie, in 1844, supposed three possible paths 1 The inflamed vessels of the injured eye communicates a disposition to similar disease to the vessels on the opposite side with which they anastomose in the cranial cavity 2 Irritation is conveyed along the ciliary nerves to the brain and reflected to the corresponding nerves of the opposite side 3 The retina is probably inflamed, and the union of the optic nerves is the chief medium by which sympathetic inflammation is produced

In 1862, Pagenstecher opposed the participation of the optic nerves, and referred the transmission exclusively to the ciliary nerves This view has since been generally held Recently Alt supports McKenzie's view, that the optic nerve plays the chief part in the transmission, and supports his opinion by the result of microscopical examination of injured eyes, in which 90 per cent had affections of the optic nerve and retina

Lastly, Snellen announces that septic bacteria have invaded the sheath of the optic nerve, and believes they are concerned in the production of sympathetic ophthalmia

The time which may elapse between an injury of an eye and sympathy of its companion varies from a few days to the limit only of a lifetime Matts reports a case in which within four days and without premonitory symptoms, an eye was attacked by sympathetic irido-cyclitis, and vision reduced to $\frac{1}{10}$ With the rarest exception, there is no danger of serious sympathy within the first week after injury There is seldom danger in less than three weeks, and as a rule it is at its height in four to six weeks

Before considering the indications for enucleation I will cite three cases somewhat in detail

Case 1 —Bessie R , aged 23, had phlyctenular ulceration of the left cornea, appearing once in about three months I found the cornea bulging, also sclero choroidal staphyloma, and the eye blind The fellow eye had not sympathized Vision was normal with a glass of + 8 D Advised patient to read with a glass + 6 D , to watch both eyes carefully and if either should give the slightest trouble to have the lost eye removed at once The unfortunate girl returned in seven and a half months, saying the sight of her good eye had been failing for five months There was a little pain in the eye when the sight began to fail and twice since Vision was now reduced to counting fingers within two feet The eye externally appeared normal The lost eye has not been the least painful, but upon pressure is slightly tender The exciting eye was removed Two weeks after enucleation the patient could read type of 14 Jæger Soon after this the sight began to fail, and in six weeks the eye was practically blind, being able to distinguish light only There is now atrophy of the optic disc

Case 2 —Mary McD , 3 years of age, fell and struck the left eye on the stump of a tree Severe pain in the eye followed for two to three days, and slight pain for two weeks longer Four weeks after the injury, I find a staphyloma of the superior quarter of the cornea, the tension of the eye reduced to —1, there is no perception of light No spontaneous pain or tenderness of the eye I cautioned the child's mother to watch carefully for any symptoms of irritation in the fellow eye, and if any should appear to return immediately to have the injured eye removed to prevent blindness of the other Seventeen days later the mother returned with the child and reported that *three* days after the consultation there was a little pain and redness of the good eye two to three times in the evening Two days after that the eye became so sensitive to light that the child could not open it Then the eye improved, and in three days seemed well In two days more the eye began to get red, and soon afterwards light began to hurt both eyes Upon examination the injured eye is found quiet The second eye presents general conjunctival hyperæmia, the iris is dull and dilates very slightly but regularly after atropin (grs iv ad ℥j) four times in an hour Sympathetic iritis Enucleation advised as the safest, or a trial of optico ciliary neurotomy The mother refuses the former but consents to the latter

The internal rectus and the optic nerve are divided, the posterior part of the globe turned forward, and the ciliary nerves with all connective tissues dissected from the posterior third of the sclera Two sutures inserted over internal rectus Bandage to eye for three hours, followed by iced compresses Dark shade, and atropin to the fellow eye and ℥ss ung hydrarg daily in the axilla. Five days after operation the eye is slightly prominent and there is $\frac{1}{12}$ inch of hypopion The sympathizing eye is improving Less photophobia and iris clearer

July 1 —Two and a half weeks after operation the second eye is still improving As the mother is compelled to return home soon it is considered safer to enucleate the lost eye, and the operation is performed Three weeks after there is slight haziness of the cornea of the second eye, and photophobia Vision is sufficient to enable the child to get about readily, though it is much impaired

Case 3 —A M , aged 23, farmer, states that he lost the right eye from disease fourteen years ago Since the loss of sight the eye has never been painful At present the ball is one-half normal size There is slight ciliary tenderness, and most probably ossification of the choroid Four years after the loss of the R E the sight of the left began to fail, unaccompanied by any pain Six weeks before consulting

me, the patient being able to distinguish *light only* with the sympathizing eye, had an operation for artificial pupil performed at the Massachusetts Eye Infirmary, Boston The surgeon said the closed pupil was caused by sympathetic inflammation Unfortunately, the operation did not improve vision In a letter replying to a friend of the patient, the operator wrote, "There is no chance of helping Mr M There is nothing more we should advise The operation (artificial pupil) was done as a last resort"

I found the globe of the sympathetic eye of normal size, the tension normal, an opaque lens, a small artificial pupil inferiorly The flame of a lamp could be seen in a dark room at 60 feet Field of vision good As the patient was practically blind, had little to lose by an operation, and possessed so good light perception and field, I decided (in spite of the usual hopelessness in such cases) to operate, and extracted the lens by the lower sections A month later the patient with a + 3½ inch lens could count fingers at 6 feet and had sufficient sight restored to do farm work The stump of the exciting eye was excised It contained a nodule of ossified choroid

Allow me to group together some of the more important points in 28 of the cases that have come under my care Four occurred in children from 3 to 11 years of age 24 in adults from 21 to 67

Form of the Injury or Disease of First Eye

Blow from knife handle	1
" " stick	1
" " twig	1
" " stone	2
" " bone	1
" " axe	1
" " hammer	1
" " piece of exploded boiler	1
Fall on stump	1
Scratched by limb of tree	1
Punctured by scissors	1
Lime in eye.	1
Graefe's scleral section in cataract extraction	1
Prick of a pin	1
Iron flew into the eye	4—19
Disease, nature of which could only be surmised	7
Perforating ulcer of the cornea	2— 9
Total,	28

Condition of the First Eye

Cyclitis, alone or complicated, existed in	8
Cyclitis and anterior staphyloma in	1
Corneal staphyloma in	1
" and sclero choroidal staphyloma in	3
Sclero corneal wound in	5
Globe shrunken	8

Interval between Injury or Disease of First Eye and Sympathetic Affection of the Second

1 to 17 weeks in	4
4 to 19 years in	13
23 to 35 years in	3
Unknown	3
Total,	24

Condition of Second Eye

Normal in	4
Sympathetic irritation in	15
Interstitial Keratitis	1
Plastic iritis	1
" " and cataract	2
" " and optic neuritis	1
" irido cyclitis	1
" " and keratitis	1
Hyperæmia of optic papilla	1
Atrophy of optic nerve	1— 9
Total,	28

RESULT OF TREATMENT

Enucleation of the First Eye —Sympathetic inflammation and blindness second eye (2) No improvement

Sympathetic inflammation V = $\frac{1}{15}$ second eye (1) Result, V = $\frac{1}{5}$

Hyperæmia of disc V = 1 J 8 in second eye (1) Result, V = 1 J 12 inches

Sympathetic irritation V = $\frac{20}{100}$ (1) Result, V = $\frac{20}{50}$

Enucleation First Eye and Cataract Extraction Second Eye —Sympathetic iritis and cataract V = Light 1 After operation vision sufficient to find way about the house

Optico Ciliary Neurotomy followed by Enucleation First Eye —Age 3 years Sympathetic iritis and vision sufficient to find her way with difficulty about the house After operation vision considerably improved

Preventive Evisceration of First Eye, Normal Second Eye 3 Cases —No symptoms followed

Preventive Enucleation First Eye Sympathetic Irritation with Normal Vision Second Eye 5 Cases —As is the result almost without exception, all symptoms of irritation ceased

Enucleation of the first eye was objected to by the patient in 9 cases of sympathetic irritation, 1 of inflammation, and 2 in which the second eye was still normal

Upon examination of the enucleated eyes ossification of the choroid was found in 5, a spicula of iron in 1, and in 1 case the ball was twice perforated, and the iron found on the inner posterior wall of the orbit

In regard to the most vital part of our subject—treatment—we will consider only the indications and contra indications for enucleation of an eye which may excite or has excited sympathetic disease in the second eye Augustus Pritchard, of Bristol, England, was the first to enucleate a human eye for sympathetic ophthalmia, in 1851 Von Graefe remarked about 1858 "I only mention this operation (enucleation to ward off sympathetic ophthalmia) as I hear it is performed by some English oculists" Critchett, of London, was the first to point out that enucleation, to be satisfactory, must be resorted to before sympathetic inflammation has set in

The indications for enucleation must have regard to the condition of both eyes, and the question of immediate operation will often depend upon the intelligence of the patient and his opportunity for consulting a surgeon

I will suppose, three conditions of the first or exciting eye

1 Blindness,

2 More or less vision,

3 Acute ophthalmitis,
and three conditions of the second eye
1 Normal,
2 Sympathetic irritation,
3 Sympathetic inflammation,
and will consider each condition of the first eye accompanied by one of the three conditions of the second

1 In case the first eye is blind while the second is still normal, surgeons differ in practice I would strongly urge enucleation to the unintelligent and to children, who do not observe symptoms of sympathetic irritation So many oculists agree that sympathetic inflammation may set in without the warning of irritation, that although this is contrary to my own experience, I would not take the responsibility of not advising enucleation even to the most intelligent and favored

2 In case the first eye has some vision or the possibility of it, and the second is still normal, there would probably be among surgeons little dissent from the advice not to enucleate

3 In case the first eye is acutely inflamed or is suffering from ophthalmitis, and the second eye normal, for myself, I shall never again enucleate an eye if acute ophthalmitis is present, one patient on whom I operated having died four days after from meningitis

4 If the first eye is blind and the second is in a stage of sympathetic irritation, there is no question of the urgent necessity of enucleation to so certainly avoid the terrible risk of loss of the second eye

5 If the first eye possesses vision, and the second is suffering from irritation, it seems to me better to sacrifice a damaged eye with uncertain prospect, than to take the great risk of losing a sound one

6 If the first eye is suffering from ophthalmitis and the second from irritation, I would prefer to puncture and apply fomentations to the first eye till acute symptoms passed—then enucleate, or if an operation be immediately very urgent, I would consider evisceration of the sclera safer than enucleation

7 If the first eye is blind, and sympathetic inflammation is present in the second eye, there is a concensus of opinion that the prognosis in severe cases is most unfavorable, and the instances of recovery are very rare under any treatment The authors I have at hand advise enucleation—some very strongly—some without having seen any benefit, others having seen benefit, while none suggest any harm to second eye from the operation The authors are Nettleship, Lawson, Wolfe, Williams, Noyes, De Wecker, Mittendorf, Juler, Carter, Stellwag, Wells, Schweigger and Mayer On the other hand, so good an authority as Mauthuer strongly advises against enucleation when serous iritis or plastic iritis only is present in second eye He says "In my opinion, there cannot be the least doubt that iritis serosa may be transformed into iritis maligna by enucleating the other eye, and we observe cases in which there is no doubt that plastic iritis, if left to itself, would have passed off as a mild attack, whereas the enucleation excited it to irido-cyclitis" Mauthuer supports his view by citing three cases—one each by Mooren, Haskett Derby and Knapp, in which serous iritis after enucleation developed respectively into irido cyclitis, repeated attacks of iritis, and irido choroiditis, with destruction of the eye, also one case of Samelsohn's in which sympathetic serous iritis recovered without enucleation The argument does not seem to me strong

In Mooren's case, after enucleation of the first eye the irido-cyclitis followed on *iridectomy* in a sympathetic eye, a very frequent result In Derby's and Knapp's cases enucleation was followed by great improvement, then relapse Is it not reasonable to say the results followed in spite of enucleation?

I cannot conceive it other than damaging to the second eye not to remove the *exciting cause* of the inflammation Again, if enucleation acts as an exciting cause of inflammation, why does the operation so invariably dispel irritation? With the histories of improvement in my own four cases, and in those of other operators, I would remove the first eye

8 If the first eye has some vision, and the second sympathetic inflammation, enucleation should not be performed The patient has a chance of vision with either eye, while an operation would lose one eye and be of doubtful benefit to the other

9 With ophthalmitis of first eye, and sympathetic inflammation of second eye, first treat the ophthalmitis and then enucleate

Those who object to having an eye removed to avoid sympathetic disease (even though, as is usual, it be a sightless blemish and a most dangerous companion), might take advantage of the optico ciliary neurotomy This operation, though less protective than enucleation, deserves more frequent trial

The advantages of evisceration over enucleation, in the greater safety to life (as I think is fairly urged), and the greater size and mobility of the stump for an artificial eye, deserve more consideration than they receive As a full report would be too lengthy, I will epitomize the remainder of 28 of the cases that have come under my care

Case 1 —Aged 40 The patient, seven months before consulting me, scratched his eye upon the limb of a tree When examined the eye was blind and presented a corneal staphyloma and cyclitis The fellow eye was normal Preventive evisceration was performed, which was followed by more reaction than usually occurs after an enucleation of the bulb

Case 2 —Aged 30 A piece of iron entered the eye Upon examination three hours later vision was only equal to perception of light The iris prolapsed through a sclero-corneal wound The prolapsed iris was excised, cocaine and cold applied to the eyes The patient would not consent to evisceration Two days later a search for the piece of steel in the eye was unsuccessfully made with a Gruening's magnet, after which the eye was eviscerated The steel was found in the vitreous mass A year later the stump moved an artificial eye much more extensively than is usual after an enucleation, and the upper lid is much less shrunken

Case 3 —Aged 44 A blow (from a stick) on the eye the previous day produced a sclero corneal

wound, and blindness and incipient ophthalmitis Preventive exenteration of bulb was performed

Case 4 —Aged 44 The eye was struck by a twig A tender stump ¼ the size of normal eye remained Enucleation was advised, but not consented to

Case 5 —Aged 10 The eye was struck by a stone Four years subsequently the eye was found blind There was a scleral cicatrix, a closed pupil and cyclitis The fellow eye appeared normal, but vision was reduced to ½ Enucleation of first eye performed, and seven months after the vision of the second eye had doubled

Case 6 —Aged 53 At the age of 16 the eye was struck by a stone A sclero choroidal staphyloma presented, and the eye was blind The second eye was sensitive to light and tender, vision normal Enucleation of the lost eye

Case 7 —Aged 38 Twenty five years previous to consultation the eye was struck by a piece of exploded boiler There is ossification of the choroid, the eye is blind Vision of fellow eye $\frac{20}{20}$, but the eye is easily fatigued in reading (asthenopia) Enucleation of lost eye was soon followed by recovery of the sympathizing eye The vitreous of the enucleated eye was replaced by bone

Case 8 —Aged 49 Eye lost twelve years previous to consultation, from a blow of a bone The lost eye presents an ossification of the choroid, and suffers from cyclitis There is sympathetic irritation of the fellow eye The lost eye was enucleated, and two weeks later the symptoms of irritation of second eye had nearly disappeared The vitreous of the enucleated eye was found nearly replaced by bone

Case 9 —Mr J , aged 45, was injured by a piece of iron from a hammer which flew some forty feet and entered the right eye Four hours after the injury I found a wound through the lower lid, through which the metal had passed and entered the eye below the lower cul de sac, hæmorrhage in the vitreous, some reaction and light perception only One week later there was pretty severe ophthalmitis of the injured eye, and sympathetic irritation and reduced vision of the second eye Enucleation was performed, and followed by rapid recovery of the sympathetic eye The chip of metal was found upon the inner wall of the orbit near the optic foramen, having twice perforated the eyeball

Case 10 —Aged 45 A piece of steel is supposed to have entered the eye fifteen years previous to consultation The second eye remained quiet for six years after the injury Since then there has been severe pain in the first eye and the second has been very sensitive to light, watered much, and has been unable to read long at a time (accommodative asthenopia) *Present state* First eye very painful, cyclitis, cataract *Second eye* Vision = $\frac{20}{20}$, asthenopia, lachrymation, photophobia Enucleation advised, but objected to

Case 11 —Aged 23 Eight years since a piece of steel flew from a hammer and struck the eye The injured eye presents cyclitis, detached and pigmented retina In second eye vision = $\frac{20}{20}$, lachrymation, photophobia Enucleation advised

Case 12 —Aged 36 Eye lost from disease four years before consultation Cyclitis and anterior staphyloma of lost eye, which has been painful at times since injury Second eye weak and painful when the first eye suffers Enucleation objected to

Case 13 —Aged 23 Eye destroyed in infancy from prick of a pin Twenty three years later the lost eye shows cyclitis and corneo scleral staphyloma Second eye has periods of conjunctival injection and photophobia Vision = $\frac{20}{20}$ Enucleation refused

Case 14 —Aged 36 Six years since an ulcer perforated the cornea There is leucoma adherens, bulb ⅔ size of normal Second eye Vision = ½, lachrymation, photophobia, and weakness of accommodation Enucleation objected to

Case 15 —Aged 21 One eye has been blind from infancy It has given no trouble till four years ago, since when it has been painful, and the fellow eye has been weak and watery First eye Cyclytis, closed pupil, cataract Tension — 2, globe ⅔ Second eye Vision with + 42 cyl = ¾, lachrymation, accommodative asthenopia Enucleation objected to

Case 16 —Aged 55 One eye has been blind for forty years During the past five years only it has at times been painful It presents atrophy of cornea, tremulous iris, cyclitis The second eye is painful when there is pain in the lost eye Enucleation objected to

Case 17 —Aged 11 At 4 years of age lost one eye from "inflammation " Six and one-half years later there is cyclitis and a shrunken bulb The second eye at times is injected, painful and sensitive to light Optico ciliary neurotomy or enucleation advised Refused Eighteen months later, the symptoms of sympathetic irritation were much less marked

Case 18 —Aged 11 A "growth" destroyed one eye at the age of 3 months When examined the small stump was found exceedingly painful on pressure It had been excruciatingly painful for six weeks, and there was sympathetic irritation of the second eye All pain of stump and the sympathetic irritation ceased four days after enucleation

Case 19 —Aged 35 Patient presented himself four weeks after a blow on the eye by a knife handle Present state Sclero corneal wound, blood in anterior chamber, cyclitis Vision equal to light perception Second eye Photophobia, pain on reading a few minutes V = $\frac{20}{20}$ Enucleation was refused ℞ Fomentations to injured eye, and leeches to the temple Four weeks later A dislocated lens is now visible Less pain in the eye Vision equal to seeing lamplight at 8 feet Enucleation again urged, objected to ℞ Fomentations and atropine Five weeks later the patient writes "My well eye has not been able to see print during two and a half weeks, and the eye is red " I replied "The eye may be completely lost if the injured eye is not immediately removed " The patient was not further heard from

Case 20 —Aged 40 Five years since the patient lost an eye by burn of lime It is occasionally painful The fellow eye is blind from sympathetic keratitis ℞ Enucleation Ossification of choroid

(bone ¼ size of a pea) of enucleated eye No improvement in vision 4½ months later

Case 21 —Aged 67 A Graefe's scleral linear section for the extraction of a cataract resulted in a plastic irido cyclitis and keratitis of the operated eye Four months later the second eye suffered from sympathetic irido cyclitis A year later still an extraction of cataract, followed by an iridectomy, and again an iridectomy of the second eye, did not restore any vision The patient had refused to have the eye first operated on enucleated

Case 22 —Aged 4 Eye struck by an axe When examined the eye was blind, and showed a depressed corneo-scleral cicatrix The second eye was suffering from sympathetic iritis and cataract, with sufficient vision to enable the child to find his way about the house Enucleation of first eye, followed later by extraction of the cataract, and subsequently by an iridectomy, resulted in some improvement in vision

Case 24 —Aged 29 At 4 years of age the eye was punctured by scissors The lost eye presented a corneal and sclero choroidal staphyloma The fellow eye had vision equal to reading No 1 Jæger type very slowly at 8 inches The whole optic papilla was hyperæmic The lost eye was enucleated, and one week later vision rose to reading No 1 Jæeger fluently at 12 inches, and the optic disc showed hyperæmia only at its periphery

Case 25 —Aged 34 Lost right eye in infancy from disease During fifteen years previous to consultation the second eye has been at times painful and red, and vision not perfect There is cyclitis of the atrophied globe of the exciting eye The sympathetic eye has vision equal to $\frac{20}{60}$ and equal to 2 Jæger 6 inches Pigment dots on lens capsule from past iritis, floating bodies in the vitreous and optic neuritis Seven weeks after enucleation the patient wrote "Vision has much improved and the eye is strong" A bony mass one-half the size of a marble was found in the choroid of the enucleated eye

163 State Street

DYSTOCIA FROM SHORT OR COILED FUNIS, AND ITS TREATMENT

Read before the Medical Society of the District of Columbia, April 27, 1887

BY A F A KING, M D,
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In a paper read before this Society six years ago, and published in the *American Journal of Obstetrics* (New York, vol xiv, No 2, April, 1881, pp 322–328), and in a subsequent publication in the *Transactions of the American Gynæcological Society* for 1886, I have called attention to protracted labor due to short or coiled funis, and laid some stress upon the method of expediting delivery in such cases by changing the posture of the lying-in woman from a recumbent position to a sitting, kneeling or squatting one An instinctive desire on the part of the woman to assume such a change of posture was also mentioned as one of the symptoms indicating shortness or coiling of the cord when it impedes delivery

At the time of reading my first paper, six years ago, I hopefully requested the members of this Society to take the matter into consideration and report the results of their observations in practice, bearing upon the questions I had presented I regret to say that, thus far, no member of the Society has reported any case relating to this subject, with the exception of Dr W H Taylor, who kindly sent me notes of one case, which I incorporated in my recent paper published in the *Transactions of the American Gynæcological Society*, and which, in all respects, illustrated the views I had previously presented Neither have any cases conflicting with these views (and which would have been equally useful and acceptable) been reported It can scarcely be doubted that some cases, at least, of protracted labor from short or coiled funis, must have occurred within the experience of the members of this Society during the last six years They have therefore, it would seem, either been overlooked, owing, perhaps, to the absence of any *serious* danger attending them, or else I have failed to present the matter in such a way as to secure for it the earnest consideration which I am more and more convinced it deserves Hence, I again solicit the attention of the Society to this subject

The cases in which a short or coiled cord leads to any serious danger are, perhaps, few, they nevertheless occasionally occur, as the records of obstetrical literature amply demonstrate But there are, I believe, very many cases in which, without any serious danger, labor is considerably protracted and many hours of agony added to the parturient woman's sufferings, and which might be safely and quickly ended by the postural treatment to which I have referred It is to this latter class of cases that I have particularly invited attention That a woman should be permitted to suffer, unnecessarily, a single hour—much less several hours—when such suffering can be safely avoided, is intrinsically wrong And while moderate protraction of a labor is not necessarily serious, yet, other things being equal, it may be said that every hour of delay, produced by accidental complications, does add *something* to the element of danger, especially with women whose nervous energies have been from some cause enfeebled, and who, in passing through the ordeal of childbirth, have no surplus strength to spare for complicating accidents, and consequent protracted suffering Furthermore, when a protracted second stage of labor, from unsuspected short or coiled cord, leads to the application of forceps (a not uncommon occurrence), with, especially in primiparæ, rupture of the perineum, the element of danger is again, to some extent, increased

What I desire, in particular, to insist upon is, that the danger in these cases (whatever its degree), the delay (whatever its duration), and the suffering (whatever its intensity and persistence), may be obviated, in the great majority of cases—perhaps not in all—by changing the posture of the female as already stated

While of late, modern obstetric authors, for the

most part, ignore coiling of the cord as a cause of dystocia, it is not a matter of surprise that they say but little of its treatment, and nothing whatever of its treatment by posture There was a time, however, in the history of obstetrics, a century or two back, when protracted labor from short cord was recognized and treated of by the then leading authorities of the obstetric art And among the methods of treatment then employed, I find—with considerable gratification—that the best results were obtained by changing the posture of the woman exactly in the manner that I have recently recommended And one of the chief objects in this paper is to reinforce my position with the recorded experience of those who have successfully adopted the method of treatment referred to, and I may also mention another method advised by Smellie, with which, however, I have had no practical experience

But before citing these older authorities, it may be of interest to inquire why the orthodox teaching of modern ones has so materially changed as that but little mention is now made, in our latest text books, of this kind of dystocia? I cannot but think the explanation of this change of opinion must be referred to the more general and frequent use of forceps in protracted labor during the last century That is to say given a case in which the head has reached the perineum, or has almost reached it, and then becomes arrested, or fails to make material progress, and in which, after several hours of ineffectual effort, the woman begins to exhibit signs of commencing exhaustion under these circumstances, nine times out of ten, the modern obstetrician—having simply satisfied himself that there exists no malproportion between the head and pelvis, and that there is no fault in the mechanism—will apply forceps and forcibly extract the child, never suspecting a short or coiled cord until he finds it after the head is born In the great majority of cases this method of practice succeeds without material injury The cord is not ruptured, the uterus is not inverted, there may, perhaps, be more bleeding than usual, owing to the placenta having been prematurely separated from the uterine wall by traction on the cord, before the child was expelled But by the usual pressure of the hand upon the fundus uteri during the delivery, the womb contracts, the placenta is found in the vagina, or partly in it, projecting from the os uteri, the case ends well, mother and child recover, and thus the delay occasioned by the coiled or short cord is disregarded and considered to be of no material importance, the little difficulty being so easily overcome by the use of forceps This is modern practice But it was different a century ago, when the use of "instruments" in labor was much less frequent, and regarded with something like dread or even timidity Dr Davis, of London, an eminent practitioner and teacher of midwifery, himself the inventor of an improved forceps bearing his name, we are told, only applied the instrument with a frequency of once in about 1,200 deliveries, while the city practitioner of to day, not uncommonly, applies forceps as often as once in every 6 or 7 labors Moreover, of late years the modern obstetrician has become disenthralled from the maxim of Dewees—"meddlesome midwifery is bad"—which formerly exerted an exaggerated influence and led to injudicious expectancy in obstetric practice

These, I think, are the real reasons why shortness of the cord, as a cause of dystocia, has been ignored—at least more or less ignored—by recent obstetrical authorities That labor is protracted by the complication in question, is just as true now as it was a hundred years ago, and our being able in most cases to remedy the difficulty by the unscientific application of "brute force" in violently extracting the fœtus with forceps, should not be allowed to stand in the way of that higher and far more scientific course of action which demands a recognition of the cause of delay, and thus opens the door to other and more desirable methods of treatment, one of which, I am persuaded, is change of posture I have said forceps overcome the difficulty in a great many cases In others, however, forceps completely fail to accomplish delivery, the force required being either beyond the strength of the obstetrician, or exceeding the limit which he considers to be judicious in obstetric practice Who of us cannot recall cases having something like the following history? It is an ordinary labor case, the head is at the perineum, there has been no progress for several hours, there are symptoms of exhaustion Dr Tommas puts on the forceps, pulls as hard as he dare, tires himself out, and gives it up as a bad job Dr Richard is sent for, and does exactly the same Then Dr Henry comes and performs the same programme for the third time, and with the same result Eventually, during the second round, or perhaps during the third, one of them succeeds in extracting the head, and an unsuspected short or coiled cord is discovered, which may or may not be regarded as a cause of the difficulty—usually *not*, in modern practice If the child be alive, the obstetricians are credited with wonderful skill, if it be dead, no one is surprised after considering the long and difficult instrumental delivery which required "three doctors" Indeed, no one would wonder if the woman died, and if she survive, what dangers, of bruising and laceration of the soft parts, of nervous shock, of subsequent acute inflammation, fever, and septicæmia, and what agonies of pain, has she not endured, from these prolonged and violent efforts, at the hands of Drs Tom, Dick and Harry!

It may be said this is an exaggerated picture I acknowledge it represents a minority case I have already said forceps will *do*, in the majority But between the *very* difficult, and *very* easy cases, there are many intermediate ones of moderate danger and moderate difficulty It may be further supposed that no such case would occur in the hands of a careful and intelligent obstetrician He would, we should think, suspect the coiled cord before birth, diagnosticate it, and institute treatment accordingly Yet why should he do this when the leading authorities of the period, whose teachings he has been taught to follow, give no attention to coiled cord as a cause of dystocia, but, on the contrary, ignore or deny it

To illustrate that cases of the greatest gravity may

occur occasionally, even to the most expert practitioners, I may call attention to a case reported to the Obstetrical Society of New York, about a year after the publication of my first paper, by Dr W T Lusk (see "Supplement" to the *Am Jour of Obst*, N Y, November, 1882, pp 324–326) He tells us "A patient was brought to the Emergency Hospital, who stated that she had been in labor five days Before her admission a number of physicians had seen her, and had made ineffectual attempts at delivery" (He does not say that these "attempts" were made *by forceps*, but I presume they were It is the same old story) When Dr Lusk first saw her, the external organs were acutely inflamed, temperature 103 5° The head could be seen through the vulva, close down by the outlet The house physician had delayed sending for Dr Lusk for some *six hours*, because it appeared as if the child would be born every moment Dr Lusk gave ether, applied forceps, but found much more resistance in delivery than he had expected In a short time, however, he managed to extract the head, and then on passing his finger up, found the cord very tense, and wound a number of times round the neck "He was about to cut the cord, which *evidently had been the cause of delay in delivery*, when a pain came on, and the child, placenta, and cord were expelled together" He adds "The child, *of course*, was dead" And a further interesting addition to this history was the death of the mother a few days later, from sloughing of the vagina communicating with the peritoneal cavity It is further stated that "the slough doubtless occurred as the result of the great and long-continued pressure of the child's head The case was specially interesting regarding the difficulty of labor due to shortening of the cord, a question exciting considerable discussion of late"

In the report of the discussion of this case, Dr Barker is credited with the following remarks "Regarding shortness of the cord as sometimes being a cause of difficult labor, he considered it an established fact, and he himself had often seen examples of it A case which he had reported before might again be alluded to When labor came on he found no disproportion between the size of the fœtal head and that of the pelvis The presentation was favorable and the labor pains were regular and vigorous, finally the head came down and began to distend the vulva, but afterwards the patient had severe pains for about an hour, without the slightest progress being made Chloroform was given, and the forceps applied, but just before extracting the head he withdrew the instrument" (the report does not state *why* he did so, but I suppose it was because the head would not come) "passed up his finger, and found the cord wound three times round the neck, and very tense Having no bistoury with which to divide the cord, he sent hurriedly to a neighboring physician for one, which arrived soon enough to enable him to extract the child alive, after division of the cord It was perfectly evident that the short cord had retarded labor, and, had he proceeded with delivery by the forceps, the placenta must have come away, and in all probability, the child's life, and perhaps the mother's, been destroyed The cord was 11 inches long, or but 2 after allowing three circles round the neck This was about twenty years ago, before then he was always in the habit, before bringing down the head, of passing in the finger to see whether the cord was round the neck, and if so, cutting it, which he had found it necessary to do on several occasions, he was more particular to do so since, and was convinced that this was oftener a cause of difficult delivery or retarded labor, of death to the child, and of violent hæmmorrhage before the expulsion of the placenta, than was *commonly supposed*"

In considering what we here find in this report, I think we may fairly conclude that neither Dr Lusk nor the several physicians who had made ineffectual attempts to deliver, had suspected the real cause of delay before the instruments were applied And in Dr Barker's case it would seem, the same thing occurred, for he did not feel for the coiled funis until removing the forceps just before the head was extracted If then mistakes of this sort occur with men so eminent in the profession as Drs Lusk and Barker, they may, and doubtless do occur, with much greater frequency in the practice of others who are less experienced and expert With regard to both these cases I am much inclined to the opinion that delivery would have occurred without the use of instruments—either forceps or bistoury—and probably in a very few minutes, had the women been placed in a sitting posture

In conclusion I may now quote from some of the older authorities, as to the influence of a short cord in retarding labor, and the methods of treatment advised to be practiced

Dr David Spence, writing in 1784 ("A System of Midwifery," Edinburgh, pp 175–178), says "The delivery may be retarded by the natural shortness of the umbilical cord, or its being twisted round the neck, or any other part of the child This is commonly first discovered when the head is so far advanced that every pain seems to promise the delivery of it, but which, on the pain going off, retracts again as far as before We are advised by many authors of note, and among others by Smellie ("Midwifery," vol i, p 188) to introduce in a case of this nature, one or more fingers into the rectum, and during the pain, by pressing upon the forehead of the child at the root of the nose, detain its head till the return of the pain, when it will gradually be pushed further and further down, so as at last it is forced through the external parts" "But I have seen several cases (p 177) where almost one half of the head was, with every pain, protruded through the parts and as often retracted, and *that for so long a time*, as to render either having recourse to the above practice, or relieving the woman by the assistance of forceps, in order to shield her from inflammation of the parts consequent upon the continued pressure of the child's head against her in the birth" Dr Spense does not mention postural treatment

Dr Smellie in his work (vol ii, p 291) reports a case in which the cord was "four times convoluted" and in which delivery was accomplished by the rectal method In another case (pp 292–3) he says "the

head came down to the middle of the pelvis after several hours—the waters broke at the os externum —" the head began to be drawn upwards immediately after the membranes broke " " I resolved to assist in bringing the head lower, and keeping it so, with the help of the forceps, had it continued much longer in that situation, but as she had every now and then a strong pain, I first tried what might be effected by different positions, and directed her to bear the pains standing, sitting, kneeling, lying on one side, or resting on the bed in a posture between sitting and lying This last was the most successful, and in three or four strong pains, the head, though still retracted, advanced lower and lower and began to dilate the os externum But observing that it made another stop I introduced two fingers into the rectum and completed the delivery " The funis was coiled three times around the neck, Dr Smellie here tells us that he found this rectal method in Mr Ould's treatise, published in 1742

Dr Samuel Bard (" Compendium of the Theory and Practice of Midwifery," New York, 1819), after referring to Smellie's rectal method, goes on to say " It is, therefore, more safe to leave this matter to the effect of a little longer time, and a few more pains, turning the woman from her side to her back, and with her head and shoulders so much raised, as to add the weight of the child to the pressure of the pains, or, what may prove more effectual, to get her upright on her feet at the back of a chair, and sometimes, though not apparently for the same reason, kneeling at the bedside will produce the same happy consequences " On page 262 he describes a case in which, however, he does not seem to have employed a change of posture He says " In time of pain the vertex pushed down into the pelvis I gave the patient every encouragement in my power, having reason to believe the event would be speedy and favorable, but herein I was disappointed, for although the pains still continued powerful, they were still ineffectual for many hours, which surprised me the more as the uterus had receded from the head of the child, which was not large, the woman, after having undergone uncommon severity of pain for the last seven hours was finally delivered " The funis was four times convoluted round the neck of the fœtus which came away together with the placenta "

Prof Henry Miller, of Louisville, (" Principles and Practice of Obstetrics," 1858, pp 489–450) writes " It was at one time very generally believed that such a disposition of the cord may operate as a serious impediment to the expulsion of the head, the shortened cord retracting the head upon the subsidence of each pain, and it was even deemed necessary in some instances to divide it with scissors to allow the head to emerge " He then refers to Smellie's rectal manœuvre, but says " there is reason to doubt its realty," and that the efficacy of the alleged pressure was most likely due to the consequent continued pressure upon the resisting perineum, which (and not the short cord) caused recession of the head

Simpson, in his " Lectures on Obstetrics," 2d ed , 1858 p 554, says " In some cases shortness of the funis or twisting of the cord around the fœtus, forms an impediment to labor Naègelé and others have doubted that shortness of the cord can act in this way " " Plenty of cases are on record, however, in which difficult labor occurred in connection with shortness of the funis "

Dr Lee, (" Lectures on Midwifery," p 121,) says " There can be no doubt that it is a very common cause of protracted labor " On the other hand Churchill (p 108) states that coiling of the cord is alleged to be a cause of difficult labor, owing to the shortening occasioned by it, but this he believes "to be wholly imaginary "

Denman, in his " Introduction to the Practice of Midwifery," 1832, 7th ed , London, pp 229–30, remarks that " The shortness of the funis is always to be suspected when the head of the child is retracted upon the declension of the pain, and it may sometimes be discovered that it is more than once twisted round the neck of the child long before it is born It has been thought that far the greater number of children are born with one or more convolutions of the funis round the neck

" Various methods have formerly been recommended for preventing this retraction of the head, some of which are insufficient and others unsafe, and the inconvenience is usually overcome by giving the patient more time But if the child should not be born when we have waited as long as we believe to be proper and consistent with its safety, or that of the parent, it will be *requisite to change her position*, and instead of suffering her to remain in a recumbent one, to take her out of bed, and raise her upright, to permit her to bear her pains in that situation, or, according to the ancient custom of this country, to let her kneel before the bed, and lean forwards upon the edge of it, or, as is now practiced in many places, to set her upon the lap of one of her assistants By any of these methods the retraction of the head of the child is not only prevented by its own gravitation, but the weight of the child will be added to the power of the pain, and it will likewise be expelled upon an inclined plane instead of a level In the course of practice, I can with *infinite satisfaction*, recollect a *great number* of cases, in which, by adverting to the benefits gained by an erect position, labors have not only been accelerated, but the use of instruments, which were before thought necessary, has been avoided "

Without accepting all of Dr Denman's statements, his practice sufficiently indicates that the postural treatment of dystocia from short cord is by no means new, but a method already demonstrated to be useful, although of late years overlooked or neglected

His theoretical explanations of its utility are in part correct, and accord in some degree with my own, as well as with those of Dr Barnes, of London, who in discussing Dr Duncan's late essay before the London Obstetrical Society, (" Trans Obstet Soc of London," vol xxiii, 1881, p 254) said " he would submit, as a means of lessening the tension of the cord artificially shortened, the method of compressing the uterus downward during the second stage " I believe, however, no one can do this half so easily

or effectually by manual pressure, as can be accomplished by changing the posture of the woman in the manner before stated

To illustrate with what indifference coiling of the cord is regarded by the general practitioner, I may call attention to "A Country Doctor's Obstetric Record," recently published in the *Philadelphia Med. and Surg Reporter*, for April 9 and 16, 1887, by Dr G Law, of Greeley, Colorado His record includes about 360 labors While it is true that in many normal cases, very meagre particulars are given, in a good number in which *abnormal* phenomena occurred, they are dwelt upon with considerable detail In *not one* instance does he make any reference whatever to coiling of the cord Yet he does mention several cases (about a dozen) in which a lingering second stage required the use of the forceps and some of them with rupture of perineum With relation to *actual* shortness of the cord, he gives one interesting case, as follows

"Feb 22, 1882 Mrs S, a very large, strong woman Vertex The most forcible expulsion or second stage efforts I ever witnessed, tried to modify them by the free administration of choloroform Notwithstanding the extreme force of the expulsive efforts, and a most capacious pelvis, and no fault of position in the child, the second stage was protracted Finally the child, a large and finely-formed male, together with the placenta and a *pailfull of blood*, was suddenly expelled The child dead and completely exsanguined The cause was a funis 4 inches long, abnormally thick and strong The placenta had been pulled from its uterine attachment before the completion of the labor, and the child had died exsanguined Would I have saved the child if I had used forceps and delivered quickly?"

My answer to the doctor's question would be You might in all probability have saved it by changing the posture of the woman, so as to force the entire womb and its contents deeper down into the pelvic cavity

MEDICAL PROGRESS.

RAPID DILATATION OF THE CERVIX, ETC —In the Section on Gynecology of the IXth International Medical Congress DR W H WATHEN read a paper on this subject He had learned in the field of experience and observation of the bad results obtained in efforts to dilate the cervical canal by tents, or to enlarge or straighten it by incisions to cure dysmenorrhœa and sterility He begged to call attention to the more satisfactory means of rapid dilatation with the bivalve or double-bladed dilators now in use, and especially to the substitution of an instrument of his device for Goodell's modification of Ellinger's dilator If tents were used, he preferred the tupello to any other variety, it being less apt to cause septic inflammation than the sponge, and dilated more rapidly, regularly, and better than the tangle He referred to endometritis, pelvic hæmatocele, pelvic cellular or peritoneal inflammation, septicæmia, pyæmia, and tetanus, as complications accompanying or following the use of tents, and did not believe that any good results, apparently, were permanently obtained He claimed the two bladed dilators are relatively aseptic and are easily used, complete the operation at one sitting, and that the dilation is comparatively free of immediate or subsequent dangers It nearly always cures the dysmenorrhœa, and often removes the causes of sterility He thought the results of the incision of the cervix up to the vaginal junction, or through the internal os, anteriorly, posteriorly, or bilaterally, even more unsatisfactory than those following the use of tents He dilates the cervix in his office, without a local or general anæsthetic, to the extent of half an inch, and allows the woman to walk or ride home a few minutes after In dilatations of from ¾ to 1 inch, he gives a hypodermic of morphia and atropia, then brings the patient under the influence of chloroform before operating He urges great cleanliness, and all means to prevent septic infection He uses three sizes of dilators, the largest the one he devised He explained the points of superiority over Goodell's

In conclusion, he urged that the operation should not be performed if there is any pelvic inflammation or trouble in the tubes or ovaries, and never, in any case, until we are reasonably positive that the cause of the trouble is in the cervical canal

Dr A Martin, of Berlin, said that the dilatation of the uterus as an operation had undergone remarkable changes since its origination The instruments shown by Dr Wathen are an improvement The great object is to open up the internal os The degree of dilatation may be required to be less in some cases of small cervix —*Med Record*, Sept 10

FUNCTION OF THE BLADDER —F BORN has examined the literature of this subject since the time of Haller He presents a careful consideration of closure of the bladder in the dead and living body, sensibility, mobility and electric irritation of the organ, and of the nerves of the bladder The conclusions of special clinical interest drawn are

1 By direct and indirect Faradization and Galvanization we can cause no certain contractions of the bladder

2 The existence of a vesico-spinal centre in the lumbar cord, a centre which regulates closure of the bladder, is not proved and unnecessary in man, since the internal sphincter vesicæ does this by means of a sensitive detrusor centre That name may therefore be given to the detrusor centre in the lumbar cord

3 All acute spinal lesions cause retention, those at the level of the lumbar cord by direct paralysis of the bladder, others by lowering the tone, during which the bladder becomes so distended by urine that it loses its contractile power Under treatment the first condition remains, the latter is improved, and micturition takes place as a reflex act

4 The supposition of reflex controlling fibres, which in micturition control the normal reflex of the spincter urethræ, and lesion of which causes the so-called spastic retention or urine, is unfounded —*Deutsche Zeitschr f Chirurgie*, Bd xxv, S 118

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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NINTH INTERNATIONAL MEDICAL CONGRESS

The Ninth International gathering of medical men took place in Washington, Sept 5, and continued its work until the afternoon of the 10th, with a harmony and good fellowship seldom witnessed in so large an assembly on any other occasion In the number of members in attendance, in the number of nationalities represented, and in the quantity and quality of the work done both in the General Sessions and in the Sections, this Congress will compare favorably with any that have preceded it, not even excepting that of London, in 1881 Neither was there any lack of generous hospitality The opening of the Congress by President Cleveland, the Address of Welcome by Secretary Bayard, the Conversazione in the grand Pension Hall, followed by a most elegant banquet given by the American Association of Medical Editors to the editors and representatives of the medical press from other countries, filled out the first day and evening The reception by the President and Mrs Cleveland and the visit to the Corcoran Gallery on Tuesday evening, the lawn party for the ladies by Mrs Dent on Wednesday afternoon, and elegant receptions in the evening by Hon Mr Glover, — Wilson, and Dr A Y P Garnett, the beautiful lawn reception for the ladies accompanying the foreign members of the Congress at Grassland by Secretary Whitney on Thursday afternoon, and the magnificent reception and banquet at Pension Hall in the evening, the free excursion for the foreign members and their ladies, to Mount Vernon on Saturday afternoon, and the grand free excursion starting the same evening for Niagara Falls and returning on the following Tuesday, constituted an exhibition of liberal and elegant hospitality that elicited from the members of the Congress from other countries the warmest commendation, as may be seen by their emphatic expressions in the closing session of the Congress, on the steamer returning from Mount Vernon, and at Niagara But in addition to all these hospitalities admirably superintended by the Committee of Arrangements, elegant lunches were given by the presidents and officers of many of the Sections to the members of their own Section We congratulate all the readers of THE JOURNAL on the full and gratifying success of the Ninth International Medical Congress

THE NATURE AND TREATMENT OF FEVER

The Address of DR AUSTIN FLINT before the International Congress on "Fever its Cause, Mechanism and Rational Treatment," is one of interest to the physiologist, the pathologist and to the general practitioner Its object, as he stated, was to show how the metamorphosis of matter involved in the normal production of animal heat is accomplished, and how the abnormal production of heat in fever, involving, as it does, abnormal activity in the metamorphosis of tissue, may be restricted, and how abnormal destruction of tissue may be limited and repaired Before going further it may be well to give the reader Dr Flint's definition of fever, as in this way he may be able more readily to follow the general discussion of the subject "Fever, as observed in the so called essential fevers, may be defined as a condition of excessive production of heat, involving defective nutrition or inanition, an excessive production and discharge of nitrogenized excrementitious matters and carbonic acid, with waste and degeneration of tissues, and partial or complete suppression of the production and discharge of water "

It is known that the production of animal heat is a phenomenon of the general processes of nutrition, and that the process with which the production of heat is most intimately connected is oxidation of certain materials which are either contained in the food or form part of the body tissues Much time has been expended by physiologists in attempting to ascertain the relations between the consumption of ogygen (with the production of certain excrementitious matters) and the generation of heat within the body, but thus far no accurate method has been arrived at Dalton and Flint have both shown that there is generally an excess of water discharged from the body over that introduced, and it has been shown that a large proportion of the hydrogen (about

85 per cent) introduced in organic combinations with the food, cannot be accounted for by the organic ingredients of the excreta It must seem then that, under certain circumstances, water is formed in the body by the union of the oxygen and hydrogen taken in And, "if it can be assumed that water is formed in this way, the heat-value of hydrogen being very great, there is little difficulty in accounting for the heat which has been estimated by direct observation to be produced in the body, as well as for a considerable surplus of heat expended in the form of muscular force" Now, if it be assumed that water is formed *de novo* in the body, while in its method of production it closely resembles carbonic acid, it differs from it in its uses as regards nutrition it is a solvent, in which it is aided by carbonic acid, the presence of which, especially in the urine, increases the solvent properties of the organic liquids And as regards the tissues, water tends to preserve their proper consistence But the water produced in the body by the union of oxygen and hydrogen behaves, as regards its production and elimination, like an excrementitious matter If we accept these propositions it must be clear that water and carbonic acid are the two excrementitious principles with whose production animal heat is most closely connected Under ordinary circumstances of alimentation, says Dr Flint, the production of carbonic acid probably has the greater relative importance, but in starvation, while the excretion of carbonic acid is diminished, the production of water is probably very largely increased, and it is evident that the production of carbonic acid is a much more important factor in the generation of animal heat than is the formation of urea.

Bacteriological studies have made it probable that all the essential fevers are primarily due to the presence of microorganisms In discussing the mechanism of fever Dr Flint considers as the type of fever the pyrexia of typhoid fever, produced by a definite microorganism and having a duration restricted within certain limits which do not vary widely Symptomatic fevers and the question of pyrexia due to exposure to external heat are not considered in this Address The cause of typhoid pyrexia may be regarded as twofold, the more important factor being an exaggeration of the chemical changes taking place in the organism, which generate the animal heat within normal limits The less important factor is a disturbance of the processes of equalization of the body heat mainly by the action of the skin The importance of exaggeration of heat-producing processes within the body is shown by the excessive consumption of oxygen and the discharge of carbonic acid and urea, a discharge which is compensated for in health by food, which as a certain influence on the quantities of these substances eliminated When, now, we look upon the water formed in the body as an excrementitious product, the formation of which in health is intimately connected with the process of heating, we at once see that the changes seen in most cases of typhoid fever, in regard to the production and discharge of water, become of great importance While in almost all essential fevers there is thirst, the discharge of water by the skin and kidneys is lessened, especially that by the skin The formation of water in health, though with it there is generation of heat, "seems to carry with it the conditions for equalization of the animal temperature by the cutaneous transpiration In simple inanition the tissues are economized by the excessive formation of water and the increased prominence of this process in calorification" With excessive muscular exertion in health there is increased discharge of water But in fever destruction and certain degenerations overtake the fats and solid tissues, and there can be but little doubt that there is diminished formation of water So that, whatever be the essential cause of the fever the matter consumed in the production of the excessive heat is chiefly fat and muscular tissue When in health there is an unusual demand for heat for use in muscular work, there is increased production of both water and carbonic acid, while in fever the increased heat must be supplied by the fatty and solid tissues As these considerations lead to some modifications of accepted views with regard to the theories of fever, and render our ideas more positive and definite than before, Dr Flint expresses these ideas in the form of propositions

1 It is probable that the original cause of most, if not of all the essential fevers is a microorganism, different in character in different forms of fever

2 Defining fever as an abnormal elevation in the general temperature of the body, the pyrexia is due to the following modifications in the normal heat producing processes

A Oxidation of certain constituents of the tissues, probably by reason of the presence of microorganisms in the blood, is exaggerated independently of increased muscular work, and without being compensated by a corresponding increase in the appropriation of nutritive material This increased waste of tissue is represented by the excess of carbonic acid and urea excreted

B The part which the formation of water within the body plays in the production of heat is either suppressed or is greatly diminished in prominence,

together with the equalizing action of cutaneous transpiration

3 Fever produces abnormal consumption of fat, with parenchymatous degenerations, for the following reasons

A The fat is consumed because it feeds the pyrexia more readily than do the other tissues of the body, and its consumption is the most important source of carbonic acid

B Parenchymatous degenerations of muscular tissue and of the solid organs occur, chiefly because the abnormal transformations of these parts, which result in an excess of urea and which probably, also, contribute to the excess of carbonic acid, are not compensated by the appropriation of nutritive matters from the blood

C It is well known that patients with unusual adipose or muscular development are likely to present a more intense pyrexia in fevers than are those whose adipose and muscular development is smaller

Finally *An essential fever is an excessive production of heat in the body, induced by a special morbific agent or agents, and due to excessive oxidation, with destruction of the tissues of the body, and either a suppression or a considerable diminution in the production of water*

Suppression or great diminution of cutaneous transpiration in the essential fevers, while it contributes, in a measure, to the rise in temperature, is not itself a cause of fever

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Having gone thus far it must be evident that the idea that fever is a conservative process, as some are in the habit of repeating as often as possible, bears the stamp of absurdity upon its face In regard to Dr Flint's discussion of the rational treatment of fever we would advise the reader to again read the "Lecture on the Treatment of Typhoid Fever" by Professor Ziemssen, published in THE JOURNAL of August 27 and Sept 3 In the treatment of fever there are certain indications specially called for by the morbid processes in different systems and organs, all of which have in view, to a greater or less extent, the prevention of injury to the organism by the pyrexia Dr Flint classifies these measures as follows 1 Reduction of the general temperature by the external application of cold 2 Reduction of temperature by the internal administration of antipyretics 3 Promotion of general nutrition by alimentation 4 Measures to supply to the system matters that can be consumed in the excessive production of heat, thereby retarding destruction of tissue In very much the same way, but more briefly, Dr Flint speaks of the use of cold and antipyretics in the treatment of fever "The amelioration of the nervous symptoms and the reduction of the pulse rate, which usually follow reduction of temperature by external refrigeration, are arguments in favor of the view that these symptoms are mainly due to the pyrexia itself, and not to the direct action of the special morbific agent which produces the disease Analogous effects are produced, although in a different way, by internal antipyretic remedies, of which antipyrin and antifebrin are now extensively used in this country in the treatment of fevers

Half a century ago graves were fed by fevers, by the advice of a "shrewd country physician" the process was reversed, and Graves fed fevers We would again refer the reader, in connection with the subject of alimentation in fever, to Professor Ziemssen's lecture It is almost fifty years since Chossat said that inanition is "a cause of death that marches in front and in silence in every disease in which alimentation is not in a normal condition," and in no disease is this more true than in typhoid fever There is an extraordinary physiological demand for heat that must be met by increased alimentation It is by alimentation that we must supply or retard waste of tissue and degenerations when we attain this end we restrain the ravages of fever A less prominent object of feeding is to supply material for consumption, so as to save destructions and degenerations of tissue "The extent to which alimentation, therefore, is to be carried is limited only by the powers of the digestive system" But, unfortunately, we have to contend with degenerations and disturbances of functions of the digestive organs, but there is no doubt that much can be accomplished by the judicious administration of proper foods Far too little attention has been given to those food articles, such as fatty or farinaceous articles, which are of nigh heat value Bearing upon the question of the value of fats in conditions involving excessive production of heat, Dr Flint mentions their value in phthisis "Leaving out of consideration, for the present, the effects of alcohol, there is no measure in the treatment of phthisis of greater recognized therapeutical value than the administration of fats"

That in many cases of disease alcohol has been more abused than used is too well known to admit of discussion, in fact, there are few drugs that have been, and are still, used so indiscriminately and injuriously as alcohol "In no case of disease," says Dr Flint, in speaking of the use of alcohol in fever, "except, perhaps, in certain instances of poisoning by animal venom, should alcohol be administered to a point where the slightest degree of alcoholic intoxication is apparent Alcohol is a potent agent in the treatment of fever, and the clinical guides which should direct its administration are easily recogniza-

ble" In accordance with the views presented by Dr Flint, the excessive production of heat in fever is a fixed condition, continuing for a period which is limited by the duration of the disease The rapid pulse and the nervous phenomena are secondary to the pyrexia, and the parenchymatous degenerations are the more remote changes of tissue which are secondary to and result from transformations involved in the long continued excessive production of heat Therefore, "any readily oxidizable substance artificially introduced will, if it be oxidized, mitigate the secondary effects of the fever upon the pulse and nervous system and retard degeneration, provided always, that it do not increase the intensity of the pyrexia Experience is not wanting to show that these results follow the judicious administration of alcohol in fever" As has already been shown, also, inanition is a constant element in a fever of long duration The disturbance of the heat-producing processes, in which the solid tissues are consumed and the production of water greatly lessened, is one of the most constant and marked conditions of fever In treatment we must endeavor to restore the normal relation between the consumption of the so called solids and the formation of water, as factors in the production of heat The condition of the digestive organs in fever is such that we cannot give fatty and farinaceous foods in sufficient quantity If we could give them in the desired quantity the use of alcohol would be unnecessary But these articles must be prepared by the digestive organs for absorption, while alcohol requires no such preparation, but is promptly taken up by the blood, and is oxidized even more readily in fever than in health Under proper conditions of the digestive organs saccharine and starchy articles of food, as well as the liver-sugar, rapidly disappear, the starch being converted into sugar in digestion It will be remembered that some years ago Dr Wm H Ford showed the presence of alcohol in small quantity in normal blood, and he attributed it to the decomposition of sugar, and he thinks that the destination of this alcohol must be to a hæmal oxidation or combustion, as a main source of animal heat, a combustion that is not only maintained by the glucose derived from the starchy food, but also from the proximate products of change in the nitrogenous tissues

The theory that hydrocarbonaceous substances are converted into alcohol in the body is in accordance with Dr Flint's view that in the generation of animal heat the production of water is an important factor If alcohol be oxidized in the body water must certainly be produced "In the administration of alcohol in fever, we are really using the hydrocarbons in a form in which they may be immediately oxidized and do not require preparation by digestion Thus we easily supply material to meet the excessive waste involved in the pyrexia, in much the same way as we administer peptonized albuminoids to meet the excessive waste of the nitrogenized parts of the tissues when the digestive organs are impaired" Clinical observation has sufficiently shown the tolerance of alcohol by phthisical and fever patients, this tolerance, says Dr Flint, of an article which is probably never useful in perfect health, is strong evidence of a demand on the part of the system for the class of alimentary principles, the hydrocarbons, which alcohol represents, and it affords an absolute guide as regards the quantity that should be employed "With an alarmingly high temperature, a rapid and feeble pulse, and grave ataxic symptoms indicating impending death, alcohol may be given largely, but never to the extent of producing its characteristic toxic effects In fever only such quantity of alcohol as is readily oxidized is useful, and any excess, which will certainly produce some degree of alcoholic intoxication and which must be eliminated as alcohol, will be productive of harm"

According to the author, therefore, the great objects in the treatment of fever itself are to limit and reduce the pyrexia by direct and indirect means, to limit and repair destruction and degeneration of tissues and organs by alimentation, to provide matters for consumption in the abnormal production of heat, and thus to place the system in the most favorable condition for recuperation after the disease shall have run its course

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The foregoing is simply intended for a fair and concise statement of the views concerning fever presented in Dr Flint's address, which was written in good style and admirably delivered A critical examination, however, will show both his definition and mechanism of fever to be defective, and his theory of the action and value of alcohol and other hydrocarbons in its treatment neither sustained by experiments nor by clinical experience

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PROCEEDINGS OF THE NINTH INTERNATIONAL MEDICAL CONGRESS —We received early as full an abstract of the proceedings of the Congress as has been furnished to any other medical journal, but so large a part of it consists in simple statements as to who read papers and who took part in the discussions, as is usual in such reports that we do not think it profitable to occupy our columns with it to the exclusion

er delay of important papers previously on hand In leading editorial articles we shall give a fair summary of the general addresses, and under the head of Progress, present some practical items of interest, knowing it to be more just to all parties, that the full Transactions, which will be issued from the press in a few months, should reach our readers with their freshness and interest unimpaired by previous partial or imperfect abstracts

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DIED, ALONZO CLARK, M D , L L D , at his residence, 23 East Twenty first street, New York, on September 13, 1887, aged 80 years Dr Clark had been for many years Professor of Pathology and Practical Medicine in the College of Physicians and Surgeons, of New York For a brief obituary, see the neurological record on another page

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RICHARD QUAIN, M D , F R C S , OF LONDON — The secular papers announce the death of this eminent physician and author, at the age of 71 years His name is especially familiar to all students of anatomy

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SOCIETY PROCEEDINGS

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, April 27, 1887

THE PRESIDENT, JOS TABER JOHNSON, M D , IN THE CHAIR

DR P J MURPHY gave the history and showed the specimen of a case of

MULTILOCULAR CYST OF THE OVARY

Mrs B , æt 33, white, married Admitted to Columbia Hospital for Women, April 11, 1887

History —Has had 3 children—youngest 5 years old, also 1 miscarriage, 1 year ago Menses have been regular from puberty Previous to last spring they lasted 5 to 6 days, since then about 8 days

First noticed a "lump in the side" in June, 1886 It was then near the centre of the abdomen and about the size of her two fists The growth of this lump has been very gradual Has lost flesh since June Appetite capricious Bowels regular Has had no œdema of the lower extremities Menses had not entirely ceased when admitted to Hospital

Examination —A large irregularly-shaped tumor occupies the entire abdominal cavity extending almost to ensiform cartilage By palpation it presents all the characteristics of an ovarian growth or a fibro-cyst of the uterus Per vaginam the uterus is found to be completely retroverted and pushed to the left side The growth is apparently not connected with the uterus proper In the right iliac fossa a round hardened mass is found by bi manual examination which is believed to be a tense minor cyst The diagnosis of a multilocular cyst was made

The usual operation was performed, under ether, April 13 On opening the peritoneum and drawing off the contents of the major cyst, the portion of the growth occupying the right iliac fossa seemed to be attached deeply down to the pelvic viscera The incision was enlarged and some slight adhesions broken down The left Fallopian tube could then be plainly traced into the right iliac fossa It presented the appearance of adherent intestine broadly stretched over the face of the cyst Upon slight traction the semi solid minor cyst was easily extracted As is my custom, a coarse ligature was thrown around the pedicle to secure it and the cyst separated from its attachment The moment the cyst was separated the stump retracted and the ligature slipped off Before the stump could be secured considerable hæmorrhage had taken place into the peritoneal cavity The stump was then transfixed with braided silk ligatures, There was still some oozing from the stump which was controlled by an uninterrupted suture of carbolized catgut The blood that had escaped from the pedicle was then carefully mopped out until the sponges when withdrawn were almost stainless The incision was then closed with 6 deep and 4 superficial sutures and dressed in the usual manner

The weight of the tumor, including its fluid contents, was 15¼ lbs , av , the fluid contents 13¾ lbs av

The patient has made an uninterrupted recovery She required only one administration of morphia to control pain and that on the first day Her temperature went above 101° only twice—once on the 7th and once on the 9th day

DR A F A KING, then read a paper entitled

DYSTOCIA FROM SHORT OR COILED FUNIS

(See p 398)

DR A Y P GARNETT believes that Dr King exaggerates the difficulties produced by a short cord He doubts whether a short or coiled cord can ever be undoubtedly ascribed as a cause of delay, as there are so many other causes of protraction, as, for instance, large head, narrow pelvis or unyielding soft parts, which might have been present in any given case He has never had protracted labor from short or coiled funis It is impossible to accept the statement that the umbilical cord in such cases would alone resist the force usually applied in a forceps delivery, without its being torn from its placental attachment separating the placenta and being itself divided, as we know how easily these accidents may happen by traction on the cord after the birth of the child He had a case with recurring hæmorrhage during the fourth month and finally a miscarriage in the fifth month, when the fetus was expelled in its envelopes He then found that the cord was abnormally attached to to the placenta about 2 inches from the umbilicus He attributes the miscarriage in this case to the growth of the child pulling away the placenta from the uterus at a point opposite the attachment of the cord The condition was a pathological one however (*Am Jour Med Sc* , Jan , 1880) He

could not agree with Dr King that mere gravity, from change of posture, could possibly overcome the dystocia from a short cord

DR H D FRY remarked that Dr King had not given us the very important point of how to make an antepartum diagnosis of coiled or short cord He has enumerated the symptoms given in the books, but as yet no positive symptom has been discovered

DR SCHATZ, of Germany has noticed a change in the rythm of the fetal heart beats in such cases At short intervals he claims that there is a reduction of the heart beats by about one-half The posture recommended by Dr King is, however, of value in obstruction from any cause whether delay is due to perineum or short cord

DR S C BUSEY has never seen an actual short cord, but has so often observed coiling of the cord that he is surprised when he does not find it From theoretical considerations he could believe that a short cord might be a factor in delaying labor but he has not observed such a result If it is such a common cause of dystocia as Dr King asserts, it would be supposed that we would more frequently have premature detachments of the placenta and antepartum hæmorrhage He does not doubt the value of change of posture in some cases of delayed labor, but he did not know that Dr King's explanation of its action is correct, for the same effect might follow a change of posture when the patient was anæsthetized He had seen labor expedited by a change from the dorsal to the left lateral position, and he always preferred the latter position because he believed it promoted the advancement of labor

DR P J MURPHY believes that experience is a better teacher than the platitudes of the books so often quoted In his 15 years of hospital experience he has never seen dystocia from a short cord, and he agrees with the preceding speakers that hæmorrhage would be more common if a short cord were retarding the advance of the child As to the posture for hastening labor in these cases, every old granny has tried that, and he cannot see how it can be of the remotest value, when our whole weight, say 140 pounds, put upon the forceps, has failed to deliver the child For his part he does not pretend to understand the mechanism of labor, nor can anyone else make out the position or feel the fortanelles in a case of protracted labor If men say they can they lie He can tell a head from a tail, but that is all

DR GARNETT inquired of Dr King the *rationale* of the effect of change of posture If, as is claimed, the posture acts through gravity assisted by the abdominal muscles causing the descent of the womb, why does not the whole, full-term gravid uterus engage with the head in this superior strait? This we know does not take place The contractions of the fibres of the uterus are concentric, and are entirely independent of the subsidiary and incidental contractions of the abdominal muscles This is shown when a parturient woman is fully under the effects of ether

DR BUSEY thought that Dr Murphy ought to explain what he meant by his assertion that no man can make out the position of the head in protracted labor Such a statement is altogether too sweeping He is aware that with a large "caput succedaneum" it is often difficult to feel the fontanelles, but even then by proper manipulation it is possible to make out the fetal head position

DR MURPHY modified his statement, saying that when called upon to a case of protracted labor, one does not always have the opportunity of making the required manipulations

DR KING said that he had not brought forward any theories to night, as the gentlemen seemed to think, on the contrary he thought they were theorizing He had stated facts and could show cases to prove his statements He thought that short or coiled cord was a much more frequent cause of dystocia than is usually suspected, but the dystocia is not necessarily dangerous to life—it may only add some hours of suffering Men who did not bear this cause of dystocia in mind would be apt to overlook it after the birth of the child

In reply to Dr Fry he stated that he had given the symptoms of short or coiled cord in a previous paper which he had referred to to-night He expressed his surprise at the force that Dr Murphy advocates using on the forceps He has always maintained that only the strength of the arms should be used in forceps delivery

DR BUSEY asked to be allowed to quote from a previous paper of Dr King's In this he seems to have thought differently about the liability of the cord to rupture or the placenta to be detached "The strongest cord will bear a resistance of 15 pounds before rupture, the average cord 8¼ pounds (Duncan), but instead of our traction force being expended *solely* upon the cord, some of it (we know not how much) is or may be spent in stretching the placenta, or partially separating it from the womb, or in indenting the uterus at the placental site, or in pulling the whole uterus down into the pelvis, or in compressing the soft parts of the fetus round which the cord is coiled"

DR KING said that detachment of the placenta might possibly be prevented in some cases by the placenta being pinched between the uterus wall and the body of the child This had just occurred to him

DR FRY said the uterine wall is sometimes drawn in by traction on the cord—this did not show any such pinching of the placenta

DR GARNETT again said that he would expect rupture of the cord or separation of the placenta, if so much force was required to bring out the head

DR KING said that Dr Garnett's remarks were based on theory while his own were founded on the facts in observed cases He admitted the truth of Dr Fry's statement, but it was one of the possibilities which he had already stated in the paper spoken of before (*Am Jour Obstet*, April, 1881)

ST LOUIS MEDICAL SOCIETY

Stated Meeting, April 9, 1887

THE PRESIDENT, S POLLAK, M D IN THE CHAIR

DR L BREMER read a paper on

MODERN TESTS FOR HYDROCHLORIC ACID — ABSENCE OF HCl IN THE CANCER OF THE STOMACH

The therapy of the stomach and its physiology have made rapid advances of late, but even in modern books, the delicate diagnostic tests of the gastric juice, which have been recently discovered are not mentioned There is no allusion to the methyl violet or co tropeoline tests for hydrochloric acid in the gastric secretion It might be asked Suppose we have a means of detecting cancer of the stomach by a certain means of chemical reaction, what good can it ever do? The answer is In order to know a curable disease, we must know the incurable ones An early differential diagnosis from other more harmless affections of the stomach is of the greatest import If there is, in any given case, an excess of acid production, the supposition is that there is too much lactic acid, and the proper remedy here is carbolic acid to kill the organisms that produce the lactic acid fermentation If, on the other hand, by withdrawing fluid injected into the stomach I should ascertain that there is an exaggerated production of hydrochloric acid, that treatment would amount to nothing, and I would try to lessen the formation of HCl by reducing the patient's allowance of salt

There are two reagents which have superseded the silver nitrate and enable us to detect even minute quantities of HCl in the gastric juice Both are aniline dyes, the one, methyl-violet, a basic, the other tropeoline, an acid aniline color A solution of methyl-violet, (1 grain to 6 ounces of distilled water) being violet in color, turns blue on the addition of very dilute HCl, such as occurs in the stomach, namely 0 03 per cent A tropæoline solution (1 grain to 6 ounces), being of a straw yellow color turns red on the addition of the HCl in the state of dilution as ordinarily met with in the stomach

Not only by distillation, as shown by Claude Bernard many years ago, can HCl be evolved from a mixture of lactic acid and common salt, but even at ordinary temperatures does a decomposition of NaCl take place by the presence of lactic acid Thus an apparently paradoxical chemical process in the stomach can be imitated outside of it, and serves to facilitate the comprehension of the production of free HCl

"If a dilute solution of methyl violet (about 0 03 to 200) be prepared and distributed in three clean test-tubes, and if to one of them dilute lactic acid is added, the color will show a bluer tint than it had before The adding of the acid must be stopped while the color is still distinctly violet To the contents of the second test-tube sodium chloride solution is added, there is no change of color If, now, ½ of the first tube and ½ of the second be poured into a fourth empty test tube, it will be seen that the mixture is distinctly bluer than that which contains the addition of lactic acid It will depend on the degree of concentration of the methyl-violet solution and the lactic acid solution whether the difference is more or less distinct If there were only a simple mixture, the color in the fourth glass would be of medium intensity, the distinctly blue color can be attributed only to HCl being set free"

In order to demonstrate lactic acid in the gastric juice, Uffelmann's test is the most reliable and convenient The lactic acid contained in the secretion is taken up by sulphuric ether, this is evaporated and the residue subjected to the following test

A fresh 4 per cent solution of carbolic acid is prepared "To 10 cc of this solution add 20 cc distilled water and 1 drop of the liquor of the perchloride of iron The amethyst blue color is made yellow by adding ½ to ⅓ of its volume of dilute lactic acid Equally safe is a solution of 1 drop of the liquor of the perchloride of iron in 50 cc of distilled water This, too, is made yellow by lactic acid

This is a very exact test for lactic acid, and it is only the lactic acid that turns the carbolic with the ferric chloride, yellow Neither of the spurious acids in the stomach, butyric or acetic, will make the color turn yellow All of these reactions can be made in an extremely simple manner When I know how the stomach of a patient is, I feel like a man that is not going it blind And there is nothing in the whole realm of therapy which is so satisfactory both to the physician and the patient, and, as a rule, so certain of good results as a rational treatment of digestive disorders and the general disturbances caused by, or associated with dyspepsia, provided, of course, that the patient follows directions and curbs his appetites The American nation is noted for its dyspepsia, and on account of its dyspepsia for its nervousness To get rid of dyspepsia is to mitigate nervousness and the whole of the nervous diseases which are the bane of the present generation

DR ADOLPH GREEN said When Dr Bremer says that if we want to treat nervous diseases, we must treat the stomach, it is true, in a great many cases If you ask another neurologist he will tell you that if you want to cure the stomach, you will have to cure the disease of the nervous system Again a gynecologist will tell you that if you want to attend to digestion you have to first attend to the genital apparatus That is also true in a great many cases, because of the intimate sympathy existing between those organs The judicious physician will, therefore, look over the whole field when he wants to treat the disturbance of any organ, with the exception of those diseases which we know are caused by a certain thing, as infectious and contagious diseases

DR D V DEAN said As regards the absence of hydrochloric acid in the stomach in cases of cancer of that organ as a positive point of diagnosis, I am not entirely assured, though I am not committed against it, nor have I a desire it should not prove a valuable diagnostic point To make it of full value, however, we must know why it is absent There can be no successful contravention of natural laws If reactions in the test-tube in the laboratory differ from reactions in the living stomach, the controlling

circumstances in the latter case are the things for us to search out The point has often been made that if in the test-tube lactic acid be added to a solution of sodium chloride, the stronger acid will not leave the sodium while it will be set free in the stomach during digestion But if another base be present with which the acid may form an insoluble salt, the acid will leave one base for the other in the test tube, or, if an organic matter be present, under certain circumstances the stronger acid will sometimes leave its base Take as example, solution of silver nitrate in contact with organic matter, especially with light or heat, when the metal will be liberated We use tartaric acid in Fehling's solution to enable the alkali to hold the copper-protoxide in solution that another organic substance—sugar—may reduce it to the suboxide So, if we add sodium chloride to 1 solution of albumen and lactic acid to another solution, no precipitate is formed in either But add the 2 resulting solutions together—either in the test-tube or in the stomach, and albumen will be precipitated by the hydrochloric acid liberated from the sodium chloride The lactate of sodium, as Dr Bremer says, is absorbed

Granting that hydrochloric acid is the chief acid in stomach digestion, and that a part at least comes from the peptic cells, if it be true that no hydrochloric acid is found in the stomach in cancer of the stomach, what is the rationale? While it is now admitted that in normal digestion the diastatic action on starch, commenced by ptyaline, is allowed in part at least, to go on in the stomach, and while the fluid fat may, by the muscular action of the stomach, be more or less broken into globules, still the main digestion in and by the stomach is that of albuminoids connecting them to soluble peptones The portion of the stomach furnishing the large part of the digestive fluid and containing the greater part of the peptic glands is the cardiac portion, that portion in which self-digestion goes on most actively after death Cancers of the stomach develop, as shown by Waldeyer, from the epithelium of the long tubular glands of the stomach, and only secondarily penetrate to the submucous and deeper tissues The great majority of cancers of the stomach are at the pyloric end, less at the œsophageal portion They are very rare in that portion, containing the peptic glands and furnishing the peptic secretion It is only intermittently, normally, that this digestive fluid is formed, and that after and during meals or the ingestion of albuminoids They only normally excite this secretion It is not claimed by physiologists that the fluid obtained by irritating the secreting part by a catheter is a perfectly normal gastric juice In cancer of the stomach we largely avoid the albuminoids as food, and give predigested food or such foods as will be digested in the tract beyond the stomach So much gastric juice is not developed, and this may be one reason or the reason that less, if not no hydrochloric acid is found in cases examined In cancer of the stomach pain is more or less constant, and food is refused In ulcer of the stomach pain occurs after taking food to relieve hunger, and the food is thrown off, relieving the pain, but exciting the digestive act Hence, hydrochloric acid may be developed

DR H C DALTON read the history of a case of

MALIGNANT EMPHYSEMA

Before reading the report of this case, I will state that I called at the house of a friend of this patient, from whose house she came to the hospital, and learned from her that the patient came to her house two days before admittance to the hospital, and had informed her that she had a miscarriage about January 15, and that she was also miscarrying at that time The history of the case is as follows

Tillie C, married, entered the hospital March 15 She gave her occupation as seamstress Diagnosis by Dr Bremer after autopsy, *malignant emphysema* She stated that there was no consumption, scrofula, gout dropsy or insanity in her family She had a sister who had fits *Her constitution and general health* had been poor She had pneumonia five years ago, followed by cerebro spinal meningitis, she had ante partum hæmorrhage 4½ years ago She stated that present sickness commenced about a month ago with general muscular lassitude, menstruation came on and lasted one day, this was followed by intense headache, bowels constipated She took laxatives, and bowels have been loose most of the time since

About a week ago she vomited several times, vomited matter was of a greenish color Had not vomited since, until last night She has no appetite, tongue coated, liver slightly enlarged and tender Patient is jaundiced The whole right pectoral region and arm is swollen and crepitates on palpation Patient has considerable pain in right breast and arm, respirations are hurried and deep Passages last night and this morning were loose and tarry Patient is menstruating at present She stated that she had hæmorrhage from lungs several times two or three years ago, had night sweats and cough, lost in weight and had œdema of feet

Many small punctures were made in right breast to allow the escape of the accumulated gas, which had an odor of sulphuretted hydrogen gas, respirations became more rapid and difficult, lips and finger-tips cyanosed, extremities cold, emphysema extended up to the neck and almost over the entire chest She died at 6 15 P M, March 18 The case being of such great interest, I invited Dr Bremer to see the autopsy, which was made 17 hours after death

Autopsy —Body of a well developed woman Chest, right shoulder and neck are puffy and discolored, color ranging from a bluish green to a dark brawny red Rigor mortis present Crepitation of subcutaneous tissues obtainable in throat, thorax, abdomen and upper extremities General, but slight, jaundice Superior longitudinal sinus contained light colored clot Spleen normal in size, intensely congested, no blood flowed from cut surface, tissue soft, friable, crepitated but did not float Kidneys larger than usual, flabby, much congested, capsules stripped off easily, leaving a granular indented appearance of their surfaces Stellæ Ver huynii prominent Both kidneys crepitated on pressure and floated in water Liver of normal size, crepitated, but did not float in

water Crepitation noticed in walls of stomach, which was congested at its cardiac end, externally and internally, contained a considerable quantity of greenish fluid Uterus 10 cent (4 in) in length, contained dark-colored material of the consistence of jelly The organ emitted a fetid odor, its tissue was firm, but crepitated and floated in water Heart tissue was soft and friable, crepitated and floated Serous linings of aorta showed evidence of recent inflammation Heart cavities contained clots of red dish brown color, which crepitated and floated in water

Before the thoracic cavity was opened, air was forced into the nose, the mouth being closed, it went directly to the stomach The anterior wall of the trachea was then perforated, and through this the lungs were inflated fully, but no air escaped from thoracic walls This was done to determine whether or not the emphysematous condition proceeded from the lungs The right pleura was also inflated by a hole through its external wall and was found to be intact The cellular tissues beneath the integument of both arms, right forearm, throat and abdomen were infiltrated, the air having the odor of sulphuretted hydrogen Its color here was dark with a red dish tinge, seeming to be in an early stage of gangrene No point of origin for the emphysematous condition could be discovered

The internal mammary, subclavian and its branches, axillary and brachial arteries were found to be clear, likewise the accompanying veins, with the exception of the venæ comites brachialis, which contained a soft, dark colored clot, beginning at a point 13 cent (5 in) above the elbow joint, and extending to the shoulder joint, having a length of 10 cent (4 in) The vessels of the left upper extremities were empty

It will be noticed that there was an emphysematous condition of many of the external organs The case is very unique and an extremely rare one I think the whole trouble due to the miscarriages

Dr Bremer The essential point in the case was the extensive emphysema of the integument, which, when punctured, emitted a fetid gas The gentlemen who made those punctures state that it was sulphuretted hydrogen gas Of course the subcutaneous emphysema suggested the lung as its origin There might have been a fracture of a rib, agglutination between the pleural layers and a communication established between the lung and the subcutaneous tissues Such a supposition was excluded by the fact that there was a terrible odor to the gases which escaped on puncture That suggested at once the idea that we had to deal with a malignant process, and in the absence of any better name I suggested the term "malignant emphysema " There is a disease of cattle, met with in Germany and France, and which also sometimes decimates the horses of those countries It is called "Rauschbrand" or gaseous gangrene Koch, years ago, established the very important fact that when ordinary earth, or dust, or the blood from decomposing animals, especially as phyniated animals, is introduced into the blood of a guinea pig or rabbit, there is set up a peculiar disease which runs a rapid course, with high fever, which is characterized pathologically by the existence of œdema, and at times by emphysema of the skin This disease was termed by Koch "malignant œdema" The older members of the profession will certainly remember that horrible complication of gangrene with emphysema occurring sometimes in complicated fractures and deep lacerated wounds in the pre antiseptic days In our days it is of rare occurrence

A French author, Tuffaud, about two years ago published a paper on what he calls *gangrène gazuse foudroyante*, as occurring after amputation There have been published in all about 123 cases of traumatic gaseous gangrene, in which the injuries were trifling compared with the fatal affection that ensued

Brieger and Ehrlich injected tincture of musk into the thighs of a number of typhoid fever patients at the Charité in Berlin, all of them got well, with the exception of two, in which malignant œdema and emphysema started from the point of injection, travelled upwards, and the two died within three days The same pathological lesions were found in these cases as in the case detailed by Dr Dalton These two observers came to the conclusion that in all probability the virus that gives rise to the malignant œdema was contained in the tincture bottle, and that it was injected and set up the disease Unfortunately, the bottle had been lost and the theory could not be verified by actual experiment At all events it seems clear that whenever a patient is suffering from infectious disease, the accidental introduction of certain germs may set up the complication of malignant œdema As a rule, man is not very susceptible to the poison, it seems that he must be debilitated by another infectious disease in order that the germ of malignant œdema may multiply in the system Brieger and Ehrlich remembered that they had seen a case of diphtheria in which emphysema had taken place They had simply noted it as a very peculiar phenomenon afterwards, in the light of later knowledge acquired, they set it down as a case of malignant œdema

The micro organism of malignant œdema is a bacillus of various sizes It seems that there is not one organism, but a number of them, in the case of experimental œdema If some earth, especially such as contains manure, is introduced into the skin of an animal (mouse, rabbit, guinea pig), there will be a general infection, the animal dies within two or three days If now one drop of blood from this animal be inoculated into another, the same disease will be produced There is a limit to this, however With the third animal the virulence comes to an end, it does not take on the fourth subject Koch separated the bacillus which in the pure state would produce the diseased condition, minus, however, the emphysema, there was only œdema He concluded then that there is another parasite which produces the gases We know that, in the common process of putrefaction, gases are produced in the body This is the work of the micro organism of putrefaction The terms bacterium termo and b lineola, to which the putrefactive process is generally attributed, comprise a great many organisms, and are not distinct

species As regards our case, I obtained and examined pieces from almost all the organs of the body, with the exception, I am sorry to say, of the brain And I found that the whole organism was fairly swarming with bacteria It must, however, be taken into consideration that the post mortem took place 17 hours after death It has been demonstrated that the bacillus of malignant emphysema will multiply after death, this is not the case with other bacterial diseases So a great many of the micro organisms seen in this case are of post mortem growth However, it was demonstrated that this material was extremely malignant, two mice and one rabbit inoculated with it died in 18 hours, and their bodies were found to be swarming with these identical organisms

I examined the spleen which looked perforated and worm eaten, and in the spaces that are even seen microscopically, there are numberless organisms demonstrable The holes are due to the expansion of the gas elaborated by bacteria This is characteristic of malignant emphysema The same was to be observed in the liver, uterus and ovary, and in the right pectoralis major muscle, which was chiefly involved The latter was a brittle mass, and the muscular tissue was broken down In certain places there was fatty degeneration of the muscle fibers, small and large fat globules were contained in the sarcolemma The subject being a female, there was a great deal of adipose tissue, and also intra muscular fat which was partly in a free state—the connective tissue capsules surrounding every fat globule having disappeared

The liberation of fat globules is the work of the microorganisms which destroy the connective tissue capsules The fat, then, met with in the broken-down muscular tissue, has two sources, one in the fatty degeneration of the muscle fibers, the other in the liberation from its connective tissue capsules of the adipose tissue

In the liver there was an immense number of bacilli The spleen, kidneys, ovaries and uterus all looked worm eaten, the holes being in places, filled by bacilli When I saw this case first and observed the pathological changes, I requested Dr Dalton to inquire into the history of the patient and see if she had not had an abortion, because there must have been some entrance for the germs It was quite improbable that the bacteria should have entered by the intestinal tract The doctor found that she had produced an abortion on herself once 3 months ago, and again recently The cavity of the uterus was coated with a black mass, and testified to recent hæmorrhage The whole uterus was perforated by the organisms, large spaces which were made by them had been distended by gases during life It is probable that the abortion had been produced with an unclean instrument The patient had been sick before, else infection would not have occurred, because it has been demonstrated (Brieger and Ehrlich) that malignant œdema in man does not occur except in conjunction with some other disease

As to the lungs, there was a very peculiar state, and one which is not very frequently seen You will remember that persons having sustained complicated fractures sometimes die very suddenly, with symptoms of asphyxia The death was due to fat embolism of the lung The fat from the yellow marrow is absorbed by the broken veins, carried to the right heart, thence to the lungs, and the smaller pulmonary vessels are stopped up by the fat giving rise to dyspnœa and eventually to asphyxia

In addition to the microorganisms which were found everywhere in the lungs in great numbers, I found many capillaries clogged by fat Where did the fat come from? You will remember what I demonstrated here in these muscles, in the first place the muscular tissue becoming degenerated, and in the second place the fat being set free The fat was absorbed by the broken veins, or may be, by lymphatics, and in the same way, as in fractures, went to the right heart and thence to the lungs So this woman died from the infection and also from fatty embolism of the lung I don't believe that there is, at present, a case on record in which this combination has been observed I don't doubt that it occurs not unfrequently Fat was also observed in the capillaries of the kidneys Fat embolism is frequently the cause of death in diabetic coma The manner of its production is not understood

In conclusion, I will say that all the organs of the body were brittle, I tried to make microscopical sections of the heart, but could not do it because the whole substance crumbled down Extreme brittleness and friability must have been the result of the noxious substances secreted by the bacteria

These observations warrant the following conclusions

Abortion when produced with unclean instruments on a person debilitated by previous disease, may give rise to malignant œdema and emphysema (general gaseous gangrene) As a complication fat embolism of the lungs and kidneys may arise

DR ADOLPH GREEN said This expression of "malignant emphysema" is a very good one But as to fat embolism of the lungs, as much as I know, it takes place usually by osteo-myelitis, spontaneously in contra-distinction to that of traumatism The majority of cases of fat embolism are from contagious diseases, consequently, that specific organism that causes osteo-myelitis is self circulating in the blood It attacks the bone and liquefies it, and as there are veins ruptured, fat is taken to the lungs in the form of embolism

DR D V DEAN said As regards the case reported by Drs Dalton and Bremer, it is not new to me, and I think most of us here have seen such cases, but have passed them under the name of septicæmia All the changes mentioned as occurring in the tissues in this case, including the liquefaction and flowing together of the fat, are common, according to the degree in all local or general gangrenous emphysema or, as it is sometimes called, fulminating or gaseous gangrene I have recognized cases of septicæmia or putrid infection as due to malignant bacteria, but not with such microscopical analysis or refinement of diagnosis as to designate the case one of malignant œdema, or malignant em

physema Davaine's septicæmia, made known in 1872, produced by injecting putrid beef-blood into the subcutaneous tissues of the rabbit, similar to Koch and Gaffky's septicæmia produced by injecting water from a foul rivulet, putrid matter, etc , is inoculable from animal or animals, and attributed to a bacterium It would be well, I think, if we were to drop the term bacterium except for the groups, as is suggested by DeBary, Ranvier and Babes, and others, to avoid confusion Malignant œdema of Koch and Gaffky is the same affection called Pasteur's septicæmia, and the bacillus of œdema appears to be identical with Pasteur's vibsion septique or vibrio septicus It produces emphysema as well as œdema. Pasteur complained that it was often confounded with bacillus anthracis by those who attempted to imitiate his inoculations for immunity from anthrax The vibrio is anærobic and will thrive in a vacuum and in carbonic acid, while the anthrax bacillus is ærobic As soon as the patient dies of charbon the bacillus anthracis begins to be replaced by the septic vibrio or malignant bacillus, so that in 24 hours the bacilli are all of the malignant kind, and those who procure blood for culture at that time use material just as fatal as that from anthrax, but very different in kind and in effect

Rauschbrand in its grosser aspects, I have been familiar with since my early boyhood, under the name of symptomatic anthrax, black leg, quarter evil or quarter-ill, so called because of its visible manifestation (emphysema and hæmorrhagic effusions occur in one or more quarters of this animal) Using the terms malignant emphysema, gaseous gangrene, fulminating gangrene, etc , for the affection proven to be due to specific malignant bacilli, the so called bacilli of malignant emphysema, we have to engraft a finer pathological knowledge upon our previous coarser knowledge of symptoms This disease is quickly fatal and communicable to man, while malignant œdema became known to us as an experimental or experimentally-produced disease But there is no reason why either affection may not come to man by accident The patient told conflicting stories To the doctor she said she was menstruating, while a day or so before she told the woman friend she (patient) was having a miscarriage The latter account would furnish the best probability that the septic organisms entered by way of the uterus Impure or earthy water may have been used also in injections, though the publication of Davaine's studies of charbon, in 1862–3, went far toward proving the etiology of the disease Koch's "Etiology of Anthrax," based on the history of development of bacillus anthracis, published in Cahn's *Beiträge, 1876*, the year I took charge of our City Hospital, gave a new impetus to my mycological studies, especially as they related to infectious diseases But in 1878 came Koch's "Investigations of the Etiology of Wound infectious Diseases" The study of this work and of what grew from it had great influence on my future course, and with the latter experiments of Koch and Gaffky and others with garden-earth injections subcutaneously in the production of malignant œdema or Pasteur's septicæmia, caused me to resolve to permit no dressing of wound with materialized earth, during my administration of the hospital, though earth dressings were quite fashionable with some of our advisers

Pasteur thought the vibrio septicus to be the cause of commencing cadaveric putrefaction Dr Bremer alluded to the part played by bacteria in stomach digestion and spoke of putrefaction of the body as a kind of bacterial digestion He also spoke of the cases of typhus in which Brieger and Ehrlich produced extensive œdema and emphysema by injection of tincture of musk, and in which they found, after death, the bacilli of malignant œdema that had probably come from the tincture baths and multiplied, producing the complication in the already diseased bodies He also alluded to the case of diphtheria in which malignant emphysema occurred It appears that when the body is affected by ever dangerous bacterial disease, if these malignant bacilli gain a footing they rapidly pass through the body and cause death But great as is our danger from pathogenic or malignant bacilli, we are as much dependent upon benignant bacteria for our maintenance It is somewhat the fashion now to use digestants as a local application in diphtheria Recently papayotin has been lauded as a local application in diphtheria

The unfortunate feature in the case before us is that its character was not recognized before death, and the autopsy was not held until 17 hours after death, when the bacilli that cannot be distinguished from ordinary putrefactive bacilli had taken complete charge of the body, and it was too late to attempt pure cultures or the experiment of inoculation upon animals, with any but mixed results Under the most favorable circumstances it would require most skilful work to differentiate and single out the specific malignant bacilli, respectively of malignant œdema and of malignant emphysema In view of the clinical history I think the diagnosis malignant œdema would practically cover the ground as far as there is actual proof Accompanying œdema in most of these malignant cases there is emphysema also As the bacillus œdematis may live in carbonic acid, so the gas may as well have been carburetted as sulphuretted hydrogen, as is in part the case in intestinal gas I am not aware of the publication of a case in this country with such analysis and diagnosis as in this one, and the merit lies in the after-death recognition of the elements for diagnosis

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK

(FROM OUR OWN CORRESPONDENT)

American Association for the Advancement of Science—Water Purification—Summer Corps of Physicians of the Board of Health—Sickness on Ship board from bad Water—Provision for the Insane

The annual meeting of the American Association for the Advancement of Science, which met here

during the second and third weeks of August, attracted much less attention than it would have done had the meeting occurred at any other season than that at which New York is most completely emptied of those who would naturally take the most interest in a gathering of this kind Still, the attendance has been large, amounting to 728, and the members have shown their interest by contributing some 250 papers to the various Sections of the Association Among them have been quite a number of special interest to medical men, such as those by Professor Alfred R Leeds, of the Stevens Institute, Hoboken, on "The Scientific Basis of the Feeding of Infants," "The Causes, Progress and Cure of the recent great Outburst of Typhoid Fever at Mount Holly, New Jersey," and "The American System of Water Purification" The essential features of this system are the following 1, artificial aeration under pressure, 2, precipitation of dirt, sewage, hardening constituents, and coloring matter by harmless precipitants, 3, mechanical filtration through filters capable of rapid reversal of current, and cleansing by mechanical means

Other papers worthy of special mention were "The Physiological and Pecuniary Economy of Food," and "The Food of Workingmen, and its Relation to Work Done," by Prof W O Atwater, "Color-Blindness among Railroad Employés," by Dr William Thompson, Professor of Ophthalmology in Jefferson Medical College, Philadelphia, and "A Review of the Data for the Study of the Prehistoric Chronology of America," by Dr Daniel G Brinton, of Philadelphia The sessions were held in the attractive new buildings of Columbia College, and were opened by a cordial address of welcome from the Rev Dr F A P Barnard, President of the College The entertainments offered the visiting members and their families included a handsome reception and promenade concert in the Metropolitan Opera House, and a number of pleasant excursions to points of interest in the vicinity of the city The main purpose of the Association, which is to encourage social intercourse among men of science, was kept in mind during the meeting, and a good deal was, no doubt, accomplished in that direction This view of the office of these meetings was well expressed by Professor Langley, the distinguished astronomer, in replying to President Barnard's address of welcome "Wherever two or three among us are gathered together," he said, "it is a happy thing that we cannot remain strangers, for doubtless of the many here who have continually breathed 'the calm and still air of delightful studies,' there are few but know by experience how hard it is for one coal to keep alight alone, and how especially good it is for the solitary thinker to be brought at times into the warmth of companionship"

The address of the retiring President, Professor Morse, of the Essex Institute, Salem, Mass, was a review of what has been done of late years toward a demonstration of the truth of the theory of evolution, of which he is an enthusiastic advocate Prof J W Powell of Washington, Director of the United States Geological Survey, was elected President for the ensuing year, and Cleveland was selected as the place for the next meeting, which begins on the fourth Wednesday in August, 1888

During the past two months much good work has been accomplished by the summer corps of physicians of the Board of Health, a service which had to be abandoned last season, on account of there having been no appropriation made for its maintenance Unusual care was taken in the selection of the fifty physicians of the corps this year, each applicant being required to pass a Civil Service examination, and special pains have been taken to secure a thorough performance by them of all the duties required of them Some idea of the work done by the corps may be obtained from the following statistics of a single week, as reported to the Board of Health by Dr Moreau Morris, Chief Inspector of the Summer Corps 4,561 tenement houses, containing 30,704 families, were visited, 1,089 cases of illness prescribed for, 153 complaints of the unsanitary condition of premises made, and 3,164 sanitary circulars and 1,512 tickets for the free excursions of the St John's Guild Floating Hospital distributed The diseases met with are classified as follows 496 diarrhœal, 23 dysenteric, 130 respiratory, 38 contagious, and 398 miscellaneous In the course of some remarks to the members of the corps at the commencement of the service, Health Commissioner Bryant gave the following excellent advice "Teach the poor people that you are their friends, and you will inspire them with confidence Do unto them what you would expect to have done unto you under similar circumstances Do not be carried away with the idea that you are a Board of Health representative and have great authority, but be gentlemen If you find that some families, where a contagious disease exists, have employed a family physician, avoid making a diagnosis merely to confirm that doctor's views Such a course is unprofessional and unmanly Learn the origin of the disease, and advise with the regular medical attendant as to the best methods to be devised to check a spread of the disease among the families in the same house or neighborhood"

A case very similar to that recently reported in THE JOURNAL, in which impure water was the cause of a serious outbreak of typhoid fever on board the Allan Line steamship "Prussia," has come to light here The vessel in question is the British steamer "G W Jones," which lately came from Guantanamo to this port On her arrival at quarantine it was found that a large number of the crew were suffering from dysentery and malarial fever, and it was ascertained that the sickness was due to the foul character of the water taken on board before the vessel left Aspinwall for Guantanamo At the latter port several men had to be transferred to the hospital

The Committee on the Insane of the State Board of Charities, in the early part of July, made a thorough investigation of the City Insane Asylum, and the report of this investigation, founded upon an immense mass of testimony, which has now been made public, reveals the existence of many abuses in the institution, among the chief of which are the overcrowding and improper feeding of the inmates and the insufficient number and unworthy character of

the attendants Among the immediate measures recommended by the committee for provisional relief are the following

1 The erection and fitting up of suitable buildings on the farm belonging to the city at Central Islip, Long Island, these buildings to be on the cottage plan, none to exceed two stories in height, and all to be inexpensive and in accordance with principles illustrated by the Alt Sherbitz Asylum in Saxony

2 The Board of Charities and Corrections, as soon as practicable, to provide adequate, healthy, and cheerful rooms for all the patients and attendants in the Ward's Island Asylum, to provide food of greater variety and nutritious qualities, to institute schools for the patients and training schools for the attendants, to give increased facilities for healthful and productive labor of the patients on the farm and otherwise, to secure a better classification of patients in the wards, to do all in their power to elevate the office, character and service of the attendants, by reducing their hours of duty, by increasing their means of rest and proper recreation, and so soon as improved accommodations and conditions will create the supply, to increase the number of attendants on acute, violent and filthy wards, and to substitute worthy and competent men in the places of the present large numbers of degraded and demoralized incumbents

3 As soon as the new conditions and environments hoped for make it possible, a provision for the treatment of the acute insane, separate from the care of the chronic insane, under the advice of the General Superintendent of both city asylums, and of the State Commissioners in Lunacy

In order to make the reforms permanent the committee recommends that either the management of the insane should be given to a Board of Trustees appointed by the Mayor, or preferably to that of a single Commissioner, in which case four single handed departments would be constituted to have charge respectively of, 1, the insane asylums, 2, the institutions for children, 3, the hospitals and the almshouse, and 4, the workhouse, city prisons and penitentiary On the omission of the city and county to provide such permanent as well as provisional relief, the committee recommend, finally, that the State shall intervene and assume the care of the city insane

P B P

PECULIAR TOXIC OR INTOXICATING EFFECT OF TOBACCO SMOKE

Dear Sir —A gentleman 39 years old, weight 170 lbs, occupation a guide roller, came into my office this evening for examination for life insurance I was smoking a cigar He politely asked me to desist from smoking whilst he was in the office, as he would not hold himself responsible for what might occur I quit smoking and raised the windows to let the offensive smoke pass out He stated that the smoke first caused an intense pain over both eyes, causing him to knit his brows, then he became, as he termed it, cranky, and would fight with his best friend After this cranky condition lasted for a time he became sick at the stomach, and would throw up the contents of his stomach, after which he would have to lie down He further stated that his mother had the same idiosyncrasy with regard to tobacco smoke, and he believed he inherited it from her, his father was a smoker He tells the story of being on a jury once and the jury had retired into a private room for deliberation Some of them began smoking He politely asked them to desist, and all but one did so It was not long till the smoker and he got to words and would have got to blows, but fortunately the tipstave called them to the jury-box, thus preventing the blows He afterwards, when the crankiness had passed off, apologized to the smoker I report this as an exceptional effect of tobacco smoke on an individual JOHN M BATTEN

Pittsburgh, Sept 13, 1887

NECROLOGY

DR ALONZO CLARK

Alonzo Clark, M D , L L D , for many years Professor of Pathology and Practical Medicine in the College of Physicians and Surgeons and President of the Faculty, died at his home, No 23 East Twenty-first street, New York, Sept 13, 1887

Dr Clark was born in Chester, Hampshire county, Mass Singularly, he never knew the exact date of his birth He believed it to be 1807, but others had told him that it was 1808 His father, Spencer Clark, was a large tanner, and in company with Colonel Edwards, controlled the New York market During his earlier years Dr Clark attended the public schools of his native town In 1824 he entered Williams College, being graduated in 1828 He at once began his medical studies and in 1835 was graduated from the College of Physicians and Surgeons, of New York Soon after graduation he was appointed Professor of Pathology and Materia Medica in the Vermont Medical College, at Burlington After a few years spent in lecturing there and attending to his increasing practice, he removed to New York and entered upon active professional duties His success as an instructor had become so marked that he was soon made Professor of Physiology and Pathology in the College of Physicians and Surgeons This position he held from 1848 until 1855 Meanwhile he was gaining a high position as a practitioner of special ability in the diagnosis and treatment of disease

In 1855 Dr Clark was appointed Professor of Pathology and Practical Medicine in the College of Physicians and Surgeons, and in the same year he became visiting physician to Bellevue Hospital In 1853 he was elected President of the New York State Medical Society In 1861 he was made President of the Medical Board and consulting physician to St Luke's Hospital He was consulting physician to the Northeast and also to the Northern Dispensary In addition to the State Medical Society he was a member of the American Medical Association, of the New York Medical and Surgical Society, of

the New York Society for the Relief of the Widows and Orphans of Medical Men, of the New York Pathological Society and of the New York Academy of Medicine

Dr Clark was a general practitioner rather than a specialist, although he paid little attention to surgery and devoted himself almost entirely to the treatment of disease Few physicians were more frequently called in consultation As an investigator he made important discoveries in medical science, some of which have become embodied in medical literature In March, 1866, there was published in the *Medical Record* one of the most pithy and admirable lectures on Asiatic cholera known in medical literature At a meeting of the New York Academy of Medicine, May 9, 1866, Dr Clark discussed the use of morphia hypodermically injected to prevent death from overdoses of aconite, and gave histories of two cases where he had by this means saved life On February 7, 1870, he delivered a lecture at the College of Physicians and Surgeons on "Relapsing Fever," which had then appeared in New York for the first time Among the important papers contributed to medical literature by Dr Clark are "Destruction of One Lung by Inflammatory Phthisis," published in *The Medical Record* January 2, 1875, "Salicylate of Soda in Rheumatism," which appeared in *The Record* October 7, 1876, and "Localized Peritonitis—Prolonged Jaundice—Renal and Cardiac Disease," published July 20 1878

Dr Clark's abilities as a lecturer as well as his high rank in his profession were recognized by his election to the presidency of the faculty of the College of Physicians and Surgeons He was also the personal instructor of many physicians of note who studied medicine in his office Personally Dr Clark was tall and dignified with head usually slightly bowed as if with thought, and with his manner tinctured with a gravity the natural result of the constant cares and heavy responsibilities he had borne through life in his work as a trusted medical adviser But with this dignity was joined an old-school courtesy and a fund of dry wit which was never diminished by the harassing anxieties of a physician's life

A few years ago Dr Clark was succeeded in the presidency of the College of Physicians and Surgeons by Dr John C Dalton

MISCELLANEOUS.

INTERNATIONAL MEDICAL CONGRESS —A special dispatch from Niagara says "The foreign delegates of the International Medical Congress passed the day sight seeing They held an impromptu meeting this evening in the parlors of the International Hotel, over which Dr Pavy, F R S , of London, presided Brief speeches were made expressing a hearty feeling of appreciation of the attentions showered upon them by Americans, and a resolution of thanks, prepared by Mr Lennox Browne, of London, and seconded by Dr Charles Reyher, imperial delegate from St Petersburg, was unanimously adopted" —*Medical Register*, Sept 17, 1887

TRANSACTIONS OF THE CONGRESS —The Secretary General has sent all the manuscript of the General Sessions to the printer, and if there is delay in the publication of the Transactions it will not be his fault Officers of Sections should prevent delay by sending in the minutes and manuscripts of their Sections at once Up to September 20, the Secretary General had received the complete proceedings of two Sections only, viz the Section on Physiology (Dr Callender), and the Section on Public and International Hygiene (Dr Joseph Jones.)

ADVICE TO MEDICAL STUDENTS —The London *Lancet* says We advise students, for their own sake, to cultivate the practical element in their own education, to learn for themselves early the interest of common cases, common remedies, and common causes of disease, to aim at readiness in detecting what is wrong, and in seeing the nature of the correctives that can be applied Our recommendation is not in favor of dogmatism and quackery and a specific for every symptom, but in favor of the cultivation of a medical aptitude for detecting and removing the run of diseases for which people consult medical practitioners No worthy student should wait for the action of medical authorities in demanding proof that he knows the profession on which his living and the life of his patients are to depend

THE SUBSCRIPTIONS TO THE COMMEMORATIVE MEDAL of the Ninth International Medical Congress have proved nearly sufficient to cover the necessary expenses of engraving the die, striking the medal, furnishing a proper case, and mailing the completed medal to the subscribers That all members of the Congress, however, may have an opportunity of possessing this memento, those who have not subscribed can yet do so any time within this month by forwarding the cost, $5 00, to Dr J M Toner, 615 Louisiana Ave , Washington, D C

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM SEPTEMBER 10, 1887, TO SEPTEMBER 16, 1887

Capt H O Perley, Asst Surgeon, ordered to accompany battalion of the Twenty Third Infantry from Ft Wayne, Mich., to Chicago, to participate in the International Military Encampment to be held in that city in October next Par 1, S O 191, Hdqrs. Div of the Atlantic, September 8, 1887

First Lieut Wm N Suter, Asst Surgeon, ordered to accompany battery "E," Third Artillery, from Washington Bks D C , to Philadelphia on the 14th inst , to participate in the military parade, during the celebration of the Centennial of the Adoption of the Constitution, September 15, 16 and 17, 1887 Par 3, S O 191, Hdqrs Div of the Atlantic, September 8, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING SEPTEMBER 17 1887

P A Surgeon Richard Ashbridge, detached from "Constellation" and to the Naval Academy, Annapolis, Md

Surgeon Joseph G Ayers, detached from Torpedo Station and wait orders

Surgeon John C Wise, ordered to relieve Surgeon Ayers at Torpedo Station

Medical Director Samuel T Cones, detached from Hospital, Chelsea, Mass , and placed on retired list September 17

Surgeon George P Brady, leave of absence extended six months, with permission to remain abroad

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE WEEK ENDING SEPTEMBER 17, 1887

Surgeon W H H Hutton, granted leave of absence for thirty days September 15, 1887

Surgeon George Purviance, granted leave of absence for thirty days September 13, 1887

P A Surgeon S T Armstrong, granted leave of absence for thirty days September 13, 1887

P A Surgeon A H Glennan, to proceed to Charleston, S C , for temporary duty September 15, 1887

Asst Surgeon J H White, granted leave of absence for twenty seven days September 13, 1887

Asst Surgeon Seaton Norman, granted leave of absence for twenty days September 16, 1887

Asst Surgeon F C Heath, to proceed to Mobile, Ala , for temporary duty September 15, 1887

THE

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ORIGINAL ARTICLES

SYNOPSIS OF THE SECOND HUNDRED CASES OF STRICTURE OF THE URETHRA TREATED BY ELECTROLYSIS WITH CASES

Read in the Section on Surgery, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY ROBERT NEWMAN, M D,

OF NEW YORK.

(*Concluded from page 393*)

The previous statistics, showing certain points, do not give the history, details and progress of the treatment, which are necessary for a thorough understanding To supply this want I will conclude with a record of cases, partly condensed and partly *in extenso* While space does not permit details of all the 100 cases, typical cases will be given to represent groups

Group I —Strictures complicated with urethral granulations or ulcers, use of the endoscope No 104 E S, Newark, N J, æt 25 years Stricture of urethra, granular urethritis June 26, 1882 Has had gonorrhœa once, 3 years ago Was cured of it in 2 months Noticed a stricture 8 months ago A gleety discharge commenced a few months before the stricture was noticed At present the stream is small, corkscrewed and of less power than formerly Examination with *bougie à boule* finds the walls of the urethra thickened by hypertrophy, there is no increased sensitiveness There are two strictures, respectively 3½ and 7 inches from the meatus The size of the strictures was No 20

June 30 Endoscope shows a large granulation at 6¼ inches from the meatus, which spot was touched with a solution of nitrate of silver A few spots in front are of little importance

July 8 Endoscope A weaker solution of nitrate of silver was applied to different places, where granulations and indurations were seen The parts are improved

July 14 Iodoform was applied through the endoscope

July 17 Electrolysis Electrode No 34 French, bulb egg-shaped Current of 5 milliampères was used for 5 minutes The electrode passed the strictures easily

July 27 Endoscope used, and affected parts painted with a brush with a weak solution of nitrate of silver

July 31 Endoscope Mucous lining red and congested At 6¼ in a few spots covered with pus are touched with the solution

August 7 Endoscope shows improvement, mucous lining has a more natural color, is not congested, and granulations have disappeared

August 31, Oct 10, and Nov 14 Electrolysis was used so that a No 27 French passed very easily Has been under observation 3 years, and was reexamined August 25, 1885

No 129 —Stricture, Granular Urethritis, Endoscope —H A R, æt 52, N Y, widower When 20 years old had a urethritis, which was not thoroughly cured 14 years ago stricture was noticed and treated by gradual dilation At present complains of gleety discharges, soreness in the urethra and a diminished stream on micturition Sometimes has spermatorrhœa with stools Bowels are regular and general condition is good

Sept 19, 1883 Examination with the *bougie à boule* revealed three strictures at 1, 3 and 5 inches from meatus, which a No 14 French would pass The walls of the urethra are thickened and sore on touch The urethra is very sensitive, and bleeds at a touch The electrolytic treatment was preceded by mild injections and the use of Mitchell's gelatine urethral bougies, to mitigate the sensitiveness

Oct 4 Electrolysis with a No 17 French, egg-shaped bulb Negative pole to stricture, which passed all strictures in 6 minutes, 4 milliampères were used, 11 gelatine bougies have been used, and urethra is no longer sensitive

Oct 10 Electrolysis No 20 French passed easily through all the strictures, there is still some soreness

Oct 20 Electrolysis, No 21 passed easily

Oct 29 Endoscope showed an engorged state of the mucous lining throughout the urethra, and granulations Mitchell's urethral bougies continued

Nov 5 Endoscope, large tube (easy), showed improvement, granulations treated locally through the endoscope

Nov 12 Electrolysis with No 23 French, 11 minutes, 3½ milliampères

Dec 3 Electrolysis, No 22 French, easy, 8 minutes, 3 milliampères

Jan 5, 1884 Endoscope Granulations at 5½ in from the meatus were touched with the solution

Jan 10 Endoscopic applications were repeated

Jan 18 A No 26 French steel sound passed easily by its own weight, while a current of 2½ milliampères was used, and did not cause the slightest

irritation Two years afterwards reexamined, found healthy and without any relapse

No 180—W A A, æt 26, New London Had gonorrhœa 3 years ago, was treated by too strong injections Subsequently a stricture was observed and treated by gradual dilation, then by electrolysis Next went to Dr Nelson, of New London, who kindly referred the patient to me

Feb 24, 1886 Examination Active inflammation has continued with constant discharge, and profuse bleeding on the slightest touch Painful erections during the night At 1½ in was a slight stricture, at 4½ in a denuded surface, bleeding on touch, and at 5 in was another stricture which a No 20 French will not pass Weak injections are recommended, and later Mitchell's urethral bougies

During the month of April electrolysis was used, and gradually the calibre of the urethra was enlarged from No 18 to No 28 in 4 seances

May 14 Electrolysis with a No 28, which was almost too large to enter the normal meatus

May 30 Endoscope showed a denuded surface of the mucous lining at 4½ in, where it was treated by local applications

June Well One year's observation, when his family physician reported him well

Group II—Complications with retention, spasm of the bladder, prostatic residue, and over-distension of bladder No 167 Dr G S M, æt 49, widower, Conn For a number of years has suffered from gleet, chronic prostatitis and cystitis, has had constant irritation and frequent micturition There is a discharge from the urethra, and for the last 8 years has suffered from a stricture

Sept 17, 1885 The stricture is at 2½ in from the meatus, the walls of the urethra are indurated, giving a paper like touch in transmitting the instrument There are spasms of the bladder and sensitiveness, particularly in the prostatic region The stricture scarcely admits a No 20 bougie Electrolysis with a No 23 French, acorn bulb, straight electrode, 3 milliamperes, 7 minutes, passed the stricture easily

Sept 27 Electrolysis, No 25 French, acorn bulb, straight This No 25 is as large as the meatus will admit The prostate is improved, there is still a little discharge, but the stricture appears to be cured

Oct 11 and 25 Two more séances of electrolysis with Nos 25 and 26 respectively The meatus was rather contracted, and had to be stretched to admit the instrument, but it was done with patience, time, and without porotomy The urethra was capacious and the electrode passed easily

Jan, 1886 Patient was married last December, and writes that he is perfectly well, prostate is not sensitive, has diminished in size, and there is no trouble since his marriage Remains well after one year's observation

No 169—Prostatitis Multiple and Impassable Strictures Retention and Spasm—J B S, æt 50, New York City, married Has been troubled with strictures for 6 years, has been treated by dilatation, once urethrotomy was performed, all without relief Has no urethral discharge, but catarrh of the bladder with violent contraction, at times retention The stream is very small, most of the time the urine dribbles away by overflow of an over distended bladder About 20 years ago had a series of attacks of gonorrhœa, after one there was continuous discharge for 1 year For the last 3 weeks his family physician has tried daily to introduce instruments into his urethra, sometimes manipulating for 2 hours at a time At last was unable to pass any instrument, offered patient an introduction to a surgeon, saying perineal section was the only means of relief In this state patient came to me, Oct 30, 1885, in great agony, with spasm of the bladder and complete retention

On examination with *bougie à boule* found strictures everywhere throughout the urethra, there were 6 distinct strictures from 1½ to 8 in from meatus Up to 5 in a No 17 French could be introduced, but beyond that, the strictures were impassable An other complication was an enlarged prostate, which pressed at the neck of the bladder against the urethra and prevented the outlet of urine

Electrolysis with the combination electrode catheter It was very difficult to introduce any instrument into his irritable urethra, which had been wounded by former injudicious manipulations, and bled at touch However, I succeeded with a filiform guide, which passed into the bladder An electrode combination catheter, No 29 French, tunnelled at the end, was then passed over the guide by electrolysis In 12 minutes the electrode had passed all strictures and entered the bladder An electric current of 3½ milliampères was used The guide was withdrawn, as well as the silver stiletto, and a quart of urine drawn off The spasm of the bladder ceased, and patient felt comfortable at once

Nov 1 Has micturated in a small stream voluntarily about every 3 hours, has no pain, soreness is less

Nov 2 Came to the office nervous and in distress, with spasm of the bladder, fearing another attack of retention The lower strictures are very tight, and will scarcely admit a filiform guide, which is frequently arrested by the lacunæ The whole urethra is tender and sore from former injudicious catheterization by the family physician Electrolysis Tunnelled electrode, No 11 French, egg shaped, over a filiform guide, 3 milliampères for 15 minutes passed all strictures with difficulty The treatment by electrolysis was continued for 3½ months, in which, altogether, 9 séances were held, and the strictures enlarged from 0 to No 25 French It was difficult to manage the case, as the cystitis, enlarged prostate and mutilated urethra made complications which needed extra care and separate treatment, at the same time The cicatrix left from the former urethrotomy was more difficult of absorption than any other of the other ordinary strictures Hæmorrhagic points of the urethra and the enlarged prostate were successfully treated with galvano cautery At this time the patient felt so well that he neglected treatment and made a trip South while he was not considered cured, and was warned not to neglect treatment

March, 1887 During a year's absence patient has felt well, and not suffered at all, and appears now from fear of a relapse Examination showed that some places in the urethra were sore, bleeding at touch, and liable to contract As patient had not been dismissed as cured, such condition was anticipated For several months he was treated again by electrolysis and galvano cautery, is so much improved that a sound No 25 passed easily into the bladder He is considered well, but remains under observation

No 177 —Stricture, Enlarged Prostate, Cystitis, Retention —T D , æt. 56, N Y , married Jan 22, 1886, was sent to me by Dr C S Wood Has had stricture for 26 years In 1860 a doctor caused him agonizing pains by using a strong injection, which appears to be the cause of his stricture Has been treated by dilatation off and on Of late has had spasm of the bladder and distension, so that he could not void urine voluntarily The urine dribbled away by overflow and most of the time he had to use a catheter The stricture closed up more and more till he could neither pass a catheter or void urine On examination three strictures were found at 3½, 6½ and 7½ in respectively, from the meatus The last two were impassable With difficulty a filiform guide was introduced Electrolysis, No 9 French, tunnelled, with catheter combination over guide passed all strictures

Jan 27 Electrolysis was repeated with a No 11 French tunnelled over a filiform guide (5 milliampères 10 minutes) In the evening came to the house in distress, with retention, was not able to pass water A syphon arrangement was made and urine drawn off drop by drop In this manner 1½ pints of muddy urine evacuated, which was putrid and loaded with pus

Jan 28 At 10 A M had not been able to pass any water The bladder had been distended to such an extent that it had lost its contractile power A small catheter was passed, and assisting with syphon at intervals, during 1½ hours 53 ounces of urine were emptied from the bladder This urine was thick, putrid with solid masses of disorganized stinking pus At 6 P M bladder will not act, flexible catheter will not pass A small silver catheter was introduced on a guide and 24 ounces of water drawn off, which had a better color, was clearer and contained little pus

Jan 29 Faradization of bladder, after which he could pass water While a guide was in the urethra 20 ounces passed Bladder washed out, the urine is improved

Jan 30 Micturition voluntarily

Feb 1 Electrolysis No 14 French, egg-shaped, tunnelled over guide, 4 milliampères 7 minutes

Feb 3 Bladder washed out and dilated

Feb 5 Electrolysis No 17 French, egg shaped bulb, tunnelled over guide, after which he passed a better stream The treatment by electrolysis and washing out the bladder was continued in the same manner till July Then a No 23 French sound passed easily into the bladder and patient felt well, having regained full power of his bladder After 1 year patient is entirely well, and objects to further treatment as he is perfectly satisfied with his present condition

Group III Strictures caused by traumatisation, some accompanied by perineal fistula No 140 Dr W T , æt 39, New York, April 1, 1884 Has had urethritis, and a stricture of 9 years standing By an accident, a ragged instrument cut the urethra in the prostatic portion, partly in the neck of the bladder This was not healed and a constant source of annoyance, causing hæmorrhage at intervals, particularly on passing an instrument Part of this cut has cicatrized and caused the stricture, the other part remaining as a granulating ulcer Electrolysis was used by an excellent practitioner, who failed because he used too strong a current, and handled the instruments carelessly Examination revealed unevenness caused by the traumatisation on the lower side of the urethra, in its depending portion, left side Electrolysis was used with a No 25 French egg shaped bulb, negative pole against the stricture, 5 milliampères for 12 minutes, with decidedly good result During 6 months of very irregular attendance 10 seances were held with electrolysis The electrode gradually enlarging until a No 32 French passed easily into the bladder without causing any pain or hæmorrhage No 30 would have been large enough, but No 32 was used at the special wish of the patient

1887 The patient has remained well

No 179 —Stricture, Perineal fistulæ —B U H , æt 35, New London, married Had a stricture for last 6 years, occasioned by an accident to the perineum A urethral abscess behind the scrotum appeared, which in time broke and established three separate fistulæ, through which matter and urine passed Had been treated by different physicians Urethrotomy had been used without benefit The strictures grew smaller, so that voluntary micturition was difficult and retention prevailed The bladder was distended and the urine dribbled away from overflow The constant dribbling of urine and discharge from fistulous openings made it necessary to wear a urinal Patient failed in every way, and was not able to attend to any business Then he applied to Dr A W Nelson, a well known, conscientious surgeon of New London, who referred him to my friend Dr A T Douglas, of the same place, to be treated by electrolysis

Jan , 1886 From this time the patient was treated by Dr Douglas and myself There were two distinct strictures at 3½ and 6½ in respectively, from the meatus, one of which was so small that no instrument would pass The urethra was irritable, the walls indurated, the fistulæ in the perineum running, and the perineum itself changed to an unrecognizable mass of infiltrated tissues Dr Douglas succeeded very well with the electrolytic treatment and enlarged the strictures in a few séances

Feb 4 I operated in New London with electrolysis in the presence of Drs Douglas, Nelson, Bramman and Stanton The strictures were passed with a No 25 French, egg-shaped bulb Soon afterwards the patient felt well and passed voluntarily a good stream of urine

Feb 9 Dr Douglas wrote to me "H was here about half an hour ago, and says he has never passed his water so freely as he did Friday and Saturday" Subsequent applications of electrolysis made him a healthy urethra of No 28 size The fistulæ all healed spontaneously as soon as the strictures were enlarged

Feb 18, 1887 A reexamination showed that no contractions had taken place A No 28 passed easily into the bladder and the patient has enjoyed perfect health and attended to his business

No 183 —Four Strictures, Traumatism, Rupture of the Urethra —H K, æt 42, married, New York City Has had strictures for 18 years, caused by former urethritis and accidents Has also suffered from cystitis, received a kick in the perineum by an accident Once he used a sound so forcibly that he ruptured the urethra Has been treated off and on, mostly by gradual dilatation, without much benefit He can tolerate the use of instruments well

April 9, 1886 Examination *Bougie a boule* meets slight indurations and thickenings of the walls of the urethra, and is arrested at 5½ in Sound No 12 will not pass this stricture A filiform guide passes easily into the bladder, over which a tunnelled sound No 9 ran tightly There were four strictures at 4, 5¼, 6¼, and 7¼ in from the meatus

April 15 Electrolysis, filiform guide, over which a tunnelled electrode No 11 French, egg shaped was used, 4 milliampères for 8 minutes It passed through all strictures, the hard ring stricture at 6½ in was overcome by slow manipulations and lowering the curve of the instrument Dr Lawson was present

For 4 months the electrolysis was continued in séances of about 9 days' intervals The sizes of the electrodes were gradually increased each séance in the following order No 14, 27, 18, 20, 23, 25, to 28 Patient was well and at last accounts, was, in 1887, in Arkansas

In all cases which were complicated with perineal fistulæ, it is a fact that they healed without any special treatment as soon as the strictures were enlarged and a urethral canal established

Group IV Strictures impassable —This group has, in a measure, been anticipated, as it is complication concomitant with other troubles in former cases A stricture is called impassable when the smallest regular instrument cannot be introduced through the obstruction of the urethra In these cases the urine may dribble away, and a filiform guide may be introduced

No 138 —This is a case belonging partly to the last group, as it was of traumatic origin, besides being impassable A N, æt 48, New York City, has had a stricture for 41 years, occasioned when a boy 7 years old by falling from a hay loft astraddle on an oat bin The strictures were multiplied by urethritis contracted in later life

March, 1884 Came under my observation The urethral canal was so small that the *bougie à boule* or any other regular instrument would not pass further than 2½ in from the meatus After some manipulations a filiform guide entered Electrolysis with a No 9 French, conical end, tunnelled electrode was used over the guide A current of 5 milliampères for 9 minutes was successful, and passed two strictures and the spasm into the bladder There were two strictures at 2½ and 3 in respectively from the meatus

After two more successful séances of electrolysis a No 14 French passed the strictures, when the patient disappeared

Sept 5, 1886 Nearly 2½ years later the patient reappears, with the following story While he was perfectly satisfied with the progress made by electrolysis, he was persuaded to have a cutting operation He submitted to urethretomy Six weeks after a sound No 30 French passed easily, and he was declared cured 1 year afterwards an eminent surgeon had to make an official report, and he found that the patient had two tight strictures at 2½ and 3 in from the meatus, proving that urethretomy had been a decided failure, and the gentleman lost his position in consequence Since then, the strictures have contracted more and the patient comes to day frightened and begging for electrolysis again The strictures were found to be contracted to about No 18 French, and the cicatrices caused by the after effects of the cutting, so tough that they were calcarious, and yielded very slowly to absorption The electric séances were recommenced in intervals, and the calibre of the urethra gradually enlarged to a No 28 French, size The patient is now well

May, 1887, was reexamined with a No 28, which proves that no relapse has taken place

No 168 —Impassable Stricture, Retention —P E, æt 38, New York City, widower Oct 11, 1885 Has had gonorrhœa in former years The stricture was marked two years ago, when the stream became gradually smaller and made micturition very troublesome At present he cannot pass water at all, and is relieved only by dribblings from the overflow of a distended bladder No bougie will pass the urethra and the patient is in great distress, having positive retention A filiform guide made its way with the greatest difficulty, there is really no urethra Electrolysis Positive electrode was held in the palm of his hand, the negative pole, a tunnelled electrode with a conical end, No 9 French size, was passed over the filiform guide, and advanced very slowly but steadily, and finally passed into the bladder The urine was drawn off, 4 milliampères were used for 6 minutes In this case it was impossible to state the number of strictures as the whole urethra was a mass of strictures

Oct 25 Electrolysis The filiform guide entered after some time spent in manipulations No 11 French, tunnelled, conical end was very tight, and advanced very slowly The worst point of the stricture is at 6½ in 10 minutes were occupied with a current of 5 milliampères

Nov 2 Electrolysis No 18 French, egg-shaped bulb, 3½ milliampères for 11 minutes

Nov 10 Electrolysis No 18 French, egg-shaped, no guide

Nov 18 Electrolysis No 20 French, egg-shaped, no guide

Nov 30 Electrolysis No 23 French, egg shaped, no guide

Dec 4 Electrolysis No 25 French, egg-shaped, no guide

Nov 1886, 1 year after, was reexamined with a sound No 25

1887 Heard from, is well

Group V—Strictures which are complicated with constitutional diseases, as Gout, Rheumatism, Pyelitis, Syphilis, etc—Typical cases we find in *Nos 114, 126, 154 and 185* of our statistics It is scarcely necessary to give these cases in detail The point is to call attention to the fact, that such diseases aggravate the strictures to the degree of acute inflammation These inflammations must be subdued before electrolysis is used Such intercurrent diseases must be treated according to their nature and indications

Group VI—Regular cases of Stricture, (single or multiple)—These are typical cases as they occur most frequently, and appear oftenest before the general practitioner One case will suffice to show, as a general rule, the treatment

Case No 148—J W, æt 32, married, New York city July 28, 1884 Twelve years ago contracted venereal, had urethritis, chanchroids and bubo, the latter was lanced Two years ago had another urethritis, which ran into gleet, and is still present Every morning the meatus sticks together with a film, which when broken, lets out two drops which are almost transparent white and sticky The stream of water has grown smaller, and is now very thin, twisted and without force Since last year the testicles are swollen

Examination—Testicles hang down low, simulating a degree of degeneration, of tuberculosis Meatus is small *Bougie a boule* meets with indurated walls throughout the urethra, the touch transmitted by the instrument is like parchment, and in a few spots cartilaginous The course of the urethra is tortuous Four strictures are found, in the following places 1st stricture is near the meatus, 2d stricture is 4 inches from the meatus, 3d stricture is 5 inches from the meatus, 4th stricture is 6¼ inches from the meatus

August 3 A filiform guide met with obstacles everywhere, but was finally introduced into the bladder *Electrolysis* Positive sponge electrode is held by patient and pressed in the palm of his hand The negative pole is a No 14 French electrode, egg-shaped bulb, tunnelled, to run over the guide in the urethra The current applied was 4 milliampères for 5 minutes The electrode passed slowly through all the strictures into the bladder Patient is weak, run down constitutionally and nervous

August 4 Feels better, has voided urine easier

August 10 Electrolysis, over guide with tunnelled electrode No 17 French, egg-shaped bulb, 4½ milliampéres, 11 minutes, passed easily through all strictures While the instrument was in the bladder, some spasm took place

August 17 Electrolysis, No 17 French, egg-shaped, without a guide advanced easily

August 24 Electrolysis, No 20 French, passed all strictures 5 milliampères, 6 minutes

August 31 Meatus is very small, so that it will not admit of a larger size than No 20

Sept 21 Electrolysis The meatus is enlarged by an electrical stretcher, which worked so well that a No 28 could be introduced

Sept 28 and Oct 5 The electrolysis with the meatus stretcher was repeated

Oct 12 He is better in every way Has no gleety discharge Bougie cannot detect any stricture Is well

Oct, 1885 Reexamined with a No 28 No relapse Well

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UNDUE INFLUENCE IN ITS RELATIONS TO MEDICAL JURISPRUDENCE

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If it had been determined that a paper should be read on the most nebulous subject within the realm of Medical Jurisprudence, perhaps none could have been selected more obscure and undefined, than the one on which I am about to speak

Undue influence in its medical and legal relations is my theme This topic has been rendered cloudy by the manner in which the subject has been treated by lawyers and judges, and doctors and authors It has not been relieved from the clouds of obscurity which surround it, by the learning and research of the judiciary of two continents There has seemed to be a hesitancy on the part of the bar to give it any settled or uniform definition That hesitancy has seemed to grow out of the difficulty of finding cases on this subject with uniform characteristics It is the absence, or imperfection of correct definitions, which tends to trip the feet of students and philosophers all along their journey through life while in search for truth Whoever shall give a *perfect* definition to Medicine or Law, to Science or its attributes, or to Nature, that Omnipresent Power, that surrounds us all, will be wiser than any being that has yet been born

Very few of the elementary writers have attempted to define this subject There are many difficulties that will confront any one who attempts to give it a satisfactory definition The judges who have had occasion to adjudicate upon it, generally have discussed the facts in each case as they arose, and when finding the subject matter tainted with undue influence, have pronounced judgment against it on the ground of fraud *and* undue influence Such a judgment is a misnomer—if it is an incorrect use of terms It is as absurd to say that an instrument is void for fraud and undue influence, as it would be to say that it is void by reason of a *fraudulent fraud*

Undue influence has its origin in fraud It is in and of itself a fraud But this infirmity of man, wherein fraud is born, with which courts have so much to do, has in its ramifications an extensive nomenclature It frequently amounts to crime, and is punished as such under different names

question And if a gift or contract made in favor of him who holds the position of influence is challenged or impeached by him who is subject to that influence, the courts of equity cast on the former the *onus probandi* of proving that the transaction was fairly conducted as if between strangers, that the weaker was not unduly impressed by the natural influence of the stronger, or the inexperienced overreached by him of more mature intelligence" See the very interesting case of Haydock vs Haydock, 33 New Jersey Equity, where an excellent definition of undue influence is given

In the case of gifts or other transactions *inter vivos* among the above named class of persons, it is considered by courts of equity that the natural influence which such relations as those in question involve, exerted by those who possess it to gain a benefit for themselves, is an undue influence

From the foregoing definitions and illustrations we may deduce the following rules In order to set aside the will or deed, or contract of a person, by reason of undue influence, we must have

1 A subject whose mind is impaired by disease or infirmity

2 There must be fraudulent persuasion or irresistible importunity

3 The subject must be fraudulently induced to do that which he would not do if left free and in his normal condition

When these concur we have *undue influence*, but when a man in the free and healthy possession of his powers is induced by trick, deceit, cunning or circumventions to execute a deed, a will, or make a contract, unjust to himself and others, such cases are denominated *actual frauds*, and redress should be given in the courts under that characterization With these general principles and definitions before us, we become interested in the examination of actual cases which may tend to their illustration

It was my purpose at the commencement of the preparation of this paper, to give some of the prominent facts relating to a large number of leading cases in this country and in England The limits prescribed to the reading of a paper here, will only give me time to briefly allude to a few in this country in addition to those already cited

Higgins vs Higgins is an interesting case It was tried in the City of New York in the Supreme Court, and was reported at length in the papers at the time It was never taken to the Court of Appeals, and hence does not appear in the reports of that Court The plaintiff, George Higgins, had been for over 25 years the chief bookkeeper, cashier, and confidant of the eminent merchant, the late A T Stewart He had a large salary, and by his frugal habits, economy and careful investments, was accumulating a handsome property, when he met at a boarding house a strange woman—a gay, gushing "grass widow," who induced him to marry her, without making any inquiry into her antecedants They lived comparatively happy for a year or two, when by reason of close confinement to his desk, for 16 hours out of 24, under severe mental strain, while cohabiting with such a woman his health began to fail He was treated for impotency and began to show premonitory symptoms of multiple sclerosis As his will power began to fail him, his wife commenced her importunities to induce him to transfer all his property to her In a short time that was accomplished His health failed to such an extent that soon after Mr Stewart's death Judge Hilton, Stewart's successor, retired him from duty, on a salary in the nature of a pension, for a time

Mr Stewart in his will had made a bequest to Higgins of $10,000, using these words in the will to wit that the money was given "in remembrance for long and faithful service" The legacy was paid to Higgins immediately after the proof of Mr Stewart's will, and in less than three days his wife induced him to transfer the check for the ten thousand dollars to her, which she immediately invested in real estate, taking the deed in her own name She became so bold in her iniquity, that she conceived the idea of getting rid of her husband by putting him into an insane asylum She went to the authorities and represented that her husband was a pauper and was insane, and by the help of a wicked pliable doctor placed him in the pauper department of the violently insane, at Bellevue Hospital, where he remained among the worst of the lunatics for two or three days The authorities finding him a broken down, harmless man, far from being a lunatic, set him at liberty She then conceived the idea of inducing him to commit suicide She told him that the money was all gone, and that she should put him into the Poor-house, besides she said that her friends had told her that Stewart's executor was about to arrest him for embezzlement That the best way for him to do was to take a large dose of morphine—that he would go to sleep and never wake up—that would be the end of him—that there was no hereafter The dread of being placed in a poor-house preyed upon him He had sense enough to disbelieve the story of his proposed arrest, but he went out and bought the morphine On his way home his Roman Catholic teachings as to the sin of suicide, came to his mind He refused to take the nap, which his kind wife had advised She then told him that as he had an acquaintance in Chicago, she would pay his fare to that city

She took him to the depot, bought a ticket, fastened it to him as a tag, as one would to a dog, for transportation She put two dollars in his pocket to pay his expenses on the way He arrived in Chicago and found kind friends, by whom he was so kindly and tenderly nursed that in a few weeks he was able to return to New York in much better health He at once commenced a suit against his wife to recover his property, on the ground of circumvention and undue influence On the trial, which lasted about seven days, it was proven that at the time he was married he was led into the snare of marrying a woman who had a husband living, that she had been engaged in keeping a policy shop, which fact had been adroitly concealed from him

Expert alienists were put upon the stand to show the mental condition of Higgins at the time he made the transfer of his property to his wife Several medical witnesses, among them one of our leading

alienists, an author of a recognized treatise on insanity and known to all of you as an original investigator in the anatomy and pathology of the nervous system, who to day honors us with his presence, testified to the mental condition of the plaintiff, demonstrating that his infirmities were such, and his mental impairment so great, that he could very easily be made a prey of undue influence The court made a decree restoring all the property in question to the plaintiff, on the ground that it had been fraudulently obtained from him by *undue influence*

An interesting case was tried last year in Chenango County, N Y The will and codicils thereto of Asa R Foster were contested In every case that I have found in this country, except this, the party exercising the undue influence has had some pecuniary interest or gain to accomplish as the reward for his iniquity But in this case he would not be benefited in the least by the change he was seeking to make in the decedent's will He had a spite against some of the relatives of the testator who had been provided for in the will, and he set about the work of having a new will made, and having the persons whom he disliked deprived of any part of the estate, merely to gratify his malice He accomplished his purpose, but the will was set aside on the ground of undue influence James W Glover, Esq , of Oxford, N Y , was the counsel for the contestants in the case

Perhaps the Hancock case, reported in 22 Hun , 38, contains as many interesting points on the subject of undue influence as any other reported case For instances of adroit cunning and audacious villainy it transcends any case within the history of the jurisprudence of this country It cannot be analyzed in one short hour It occupied over four years in taking testimony, at intervals, in the Probate Court I can only call attention briefly to a small number of its peculiar features

For the better understanding of the case a biographical sketch of decedent will be proper Hancock was born in England about 84 years ago He left no widow or children In person he was about 5 feet 8 inches in height, of heavy form, rather large neck, and florid complexion He was a moral and very polite man, but of an irritable and impetuous temper, hasty in his conclusions, and sometimes uncharitable in his judgment of men He was very upright in his dealings, full of sympathy for the poor and oppressed, and abounding in benevolence In 1850 he was engaged in the hosiery business in the city of New York in company with Mr C M Carpenter He continued in business for 19 years, and amassed a fortune of over $200,000 During all these years, and until he became demented, a very warm personal attachment existed between himself and Mr Carpenter, so much so that he never engaged in any important business transaction without first consulting him He frequently said that he was under more obligation to Mr Carpenter for his fortune than any other person living In 1869 he made a will, appointing Mr Carpenter one of his executors, making a large bequest to him and his family, and vesting in him important trusts

While he was accumulating his fortune he made his home with Mrs Thatcher, a kind, genial, and most estimable widow lady, who was then keeping house in Brooklyn She having removed to Orange, N J , he went there to reside with her, and to make that his home, her son, until his premature death, being one of his favorite employés, her daughters nursing and watching him in his sickness with filial care and tenderness, and their mother sparing neither care, nor time, nor toil nor expense, in making him such a home as his circumstances would suggest while in active business pursuits, and such an asylum as his infirmities seemed to require in his declining years He spoke of her home as his home, and of her daughters with a tenderness akin to parental affection That lady and her daughters he liberally provided for in a will of 1869, and another will of 1874 He increased the amount to Mrs Thatcher in the will of 1874 He had a nephew whom he had educated, who had entered one of the learned professions That nephew had been abundantly remembered in the will of 1869 and in a will of 1873 He was bequeathed a large sum in the will of 1874, and was made an executor in the will of 1874

Intermediate the date of the will of 1869 and the will of January, 1874, a number of papers had been drawn at the request of Hancock, designed to be executed by him as his will, in all of which he had made large legacies to Mr Carpenter, Mrs Thatcher and her daughters, and to his nephew Whether those papers were ever executed does not appear The fact of his friendly regard for all these persons does appear, and continued to be manifested until he became the victim of the frauds hereafter mentioned His plan for the distribution of his estate was to bestow about one half upon his kindred, and divide the other half between his personal friends and benevolent societies

His mind and memory began to fail him soon after the year 1869 In 1874 he was informed by an eminent physician, Dr Pierson, that a slow paralysis was coming upon him In February, 1874, he had a severe stroke of paralysis From that time until his death his mental powers failed to such an extent that at the time the two codicils, dated April 14, 1874, and July 1, 1874, were executed, his testamentary capacity was all gone The second and third alleged codicils to his will were contested on the ground of fraud, and also undue influence

In April, 1874, he went to the house of his brother-in-law, at Nanuet, to visit his friends, with the view of returning to his home in Orange His illness increased He was induced to remain at Nanuet, where he languished during the summer, and on the 12th day of September, died How, during that fatal summer, the whole purposes of his life became apparently changed, how the proponent, for whom through life he manifested the greatest aversion, came to be appointed his executor in place of his friend, how all the bequests to Mrs Thatcher and her daughters, and to Mr Carpenter, and to his nephew, and to most of the charities, came to be revoked, and how his life-long friendship for Mr Carpenter and his nephew were turned to hate, and why it was that frauds and

impositions were practiced upon that dying man to such an extent as to deprive him of the ability to make a free and valid disposition of his estate, and why alleged codicils to his will were absolutely void, it becomes interesting to consider

The line of attack upon the codicils consisted principally of four divisions.

1 To prove his failure of memory

2. To show the physical infirmities of the decedent

3 The duress, restraint, and deception to which he was subjected

4 The actual frauds that were practiced upon him

1 There were 16 witnesses placed on the stand by the contestants, most of whom had long been acquainted with the decedent, and had many business transactions with him, to testify respecting his memory They described 19 distinct instances showing defect of mind and memory, aside from the testimony given by the experts He was proved to be unable to recall places, or remember the locality of his recent familiar resorts Having bought clothing he would be unable to say the next day how he came by it He would deny that it belonged to him Having burned the draft of one of his wills he forgot what became of it, and accused one of his friends of having carried it out of the country

Having made a codicil to his last will disinheriting a beloved friend, he was asked if such was the fact, and he stoutly denied it, and claimed that the friend was a legatee to a large amount He would furnish his lawyer with a draft of a will, in his own handwriting, and come the next day with another, and when told that he had furnished one the day before, he would deny it, and on being shown the paper which he had left, would say "Oh, yes! I had forgotten all about it" This happened on as many as ten or twelve occasions

He was unable to recall the names of the beneficiaries under his often prepared but unexecuted wills He was unable to recall to mind the condition of his estate These are only a few specimens of his failure of memory

2 His physical infirmities were proven to consist of paralysis under the designation of hemiplegia, also an aggravated form of diabetes mellitus and senile dementia

Dr Pierson, of New Jersey, who had been his medical attendant, made a thorough diagnosis of his case His infirmities were aggravated by the conduct of the proponents during the incubation of the iniquity which resulted in the codicils They gave him beer in the morning, wine at noon, and brandy at night Dr Pierson testified that the mind of the decedent was so impaired as to be unfit to make a valid will Dr Charles Corey, who has had much to do with mental disease, testified to the same, also Dr Dougherty, of New Jersey

3 The testimony was conclusive that he was restrained by proponents to remain with them away from his home, his confidential friends, his nurses, and his trusted advisers—where he had a right to be to prepare for the solemn scenes of his approaching dissolution

4 The actual frauds that were practiced may be grouped together as follows

First They conceived the plan of making him believe that the will of January, 1874, was void for informality in its execution They saw that before anything was to be said against any bequests, or against the character of any of the legatees, in order that they might not be met with the argument that it was too late now—that the will had been made, no changes could now be made—it would become necessary to get rid of the will of 1874, either by a new one or by codicils thereto, when that was out of the way, then an open field would lie before them to make out such a will as would suit themselves, hence, they commenced fraud number one, which consisted in impressing on his weak mind the adroit, well-planned, but transparent lie, that the will of January, 1874, was defective because the subscribing witnesses had not put down their residences All lawyers know, most laymen know, that such omission does not in any degree invalidate the will

The evidence was that the proponents had talked over the pretended defect It is apparent that they had taken it to some lawyer, and he had told them that the omission did not invalidate the will, but they resolved to use the discovery as a "good enough Morgan," and hence they persisted in playing the fraud upon him by telling him that the will was not properly executed He often said, "I don't want to make any changes in my will" The proponent gives one of his lucid versions to the matter

Question Did you ever state to the testator, at any time, that the places of the residences of the different witnesses were not stated in the will, or were not known, and that such omission might prove embarrassing in the future, or words to that effect?

Answer I can't say for certain I might possibly have said it

Q Did you ever hear your wife, or her sister, say to the testator anything like that?

A I think I heard my sister in-law say to the testator that the place of their residence was not in the will

Q When did you hear her say that?

A I think it was some time in October, 1874 No, it was a month or two before he died It was in July, 1874 No, I recollect now, it was in September—I remember the circumstance

Q What time?

A It was the evening of the day of the funeral

This fraud was practiced on the dying man at the very time when he was protesting that he wanted to make no changes in his will But having yielded to fears excited that his will was void by reason of the omission of the witnesses to state their residences, aroused by the fear of dying intestate, he yields that point, and consents either to consent to make a new will, or make codicils, or have the lawyer come and fix it so that it would be legal

Having gained the first point, and overcome his express desire "not to make any changes," the remaining task to accomplish any and all other wicked purposes was easy Having by fraud made the decedent consent to make new codicils, the next step was to determine in the minds of the conspirators what changes should be made

Fraud No 2 consisted of the scheme to get rid of Mr Carpenter That was to be brought about by using the scissors on the letter of the nephew, and parading the words before the remnants of the intellect of that slow dying paralytic, "Carpenter is a villain" "Carpenter's no man to be an executor" "Your own dear nephew says he is a villain, and has undoubted proof" The nephew had written his uncle a letter which would have been damaging to the proponents, if put in evidence, but it contained the words "Carpenter is a villain" "He is no man to be an executor" The proponents' counsel were so unwise as to cut out those words, and offer them in evidence, detached from the letter The truth was that this pious nephew (a sort of a preacher) was anxious to have Carpenter discarded as executor in order that he might have the place himself It turned out to be a boomerang, to trouble the hypocrite It became necessary to say nothing against the nephew while they were manipulating matters against Carpenter, because they were using the nephew as a witness against Carpenter But as soon as they deemed the mind of the decedent sufficiently poisoned against Carpenter, they then opened against the nephew himself

Fraud No 3, which consisted of the cut leaves which the nephew had attempted to explain The decedent, no doubt to get rid of their importunities while in his weak state of mind said, "Yes, strike out Alex , if he would do all this he must be a rascal and a villain" And yet in his lucid intervals, it is evident that he did not know that he had cut his nephew out of his will The next step in this drama of fraud was to get rid of Mrs Thatcher and her daughter and the little orphan children at Orange So firmly were the testator's affections placed upon this lady and her family, that they dared not open their schemes against her until May or June, nor until that enervating disease which they saw was rapidly carrying their victim to the tomb had made him an easy prey to their designs

Fraud No 4 consisted in creating the delusion that Mrs Thatcher had been robbing him This was done by the proponent, with the aid of others in his family, as the evidence shows, substantially as follows

After discussing what had been done for Mrs Thatcher, proponent brings in the books and says "Why, John, I can't make out anything from these books They are all wrong They have had them at Mrs Thatcher's They have fixed them to suit themselves Why, you have been robbed!" The decedent did not stop to see what sort of a bookkeeper was addressing him No wonder that the proponent could not make out anything from the books It would have been as appropriate to employ him in calculating an eclipse of the sun as to ask him to determine correct results from his examination of a set of account books He knew that Hancock had made his home at Mrs Thatcher's for nearly 15 years He knew that a man of Hancock's wealth could well afford to pay for such care and nursing as he enjoyed at least $2,000 per year—a sum equal to $30,000 He knew that all the money that Mrs Thatcher had received was nothing like that sum, and yet he attempted to impress upon the mind of the decedent that he had been robbed by Mrs Thatcher But they had other arrows in their quiver Maria comes to the front She tells her brother that Mrs Thatcher had tried to marry him, and tried to seduce him

By what process the mind of the decedent was filled with the delusion that his friends at Orange intended to poison him, is known to none but Omniscience and the proponent's family But the law has wisely and humanely stepped in and said that the contestants are not bound to give the process by which the delusion was created It is enough to show the existence of the delusion The Court of Appeals said in the case of Tyler vs Gardiner, hereinbefore cited (35 N Y, 594) "It is not to be supposed that fraud and undue influence are ordinarily susceptible of direct proof" This very delusion in reference to fear of poison, while it was used as an influence to deprive Mrs Thatcher of any share in the estate, is a powerful argument that the decedent was insane

In Seaman's Friend Society vs Hopper (33 N Y, 624), the law is laid down as follows "If a person persistently believes supposed facts which have no real existence, except in his perverted imagination, and against all evidence and probability, and conducts himself, however logically, upon the assumption of their existence, he is, so far as they are concerned, under a marked delusion, and delusion in that sense is insanity"

Having got rid of Mrs Thatcher and the other legatees at Orange it becomes an easy matter to dispose of the little innocents of the orphan asylum at Orange The conduct of the proponents during the last days of the testator's life furnishes evidence of the strongest character that they were haunted by spectres of their frauds in procuring the last two codicils, and were determined to obtain possession of every dollar of his property without regard to wills or codicils, and thereby prevent any investigation which would expose their infamy To accomplish this the proponents employed a person calling himself a lawyer to prepare a power of attorney containing a transfer of all the property of the decedent to the persons who had procured the codicils to be made, to which they procured the signature of the decedent to be affixed while in a moribund condition, which they took to his bankers and demanded the decedent's money The papers being informal the bankers declined to pay until papers could be properly authenticated They were taken back to a notary for correction But before they could again reach the bank, the testator was dead

The two codicils were set aside by the Probate Judge on the ground of undue influence alone His decree was affirmed at the General Term of the Supreme Court and again by the Court of Appeals The case is reported in the Supreme Court in 22 Hun 40 The opinion of the Surrogate was very learned, lengthy and elaborate, while it was followed in the higher courts, yet it was not *republished* in the appellate courts

Permit, in conclusion, a single reflection upon the moral aspect of this singular case

All experience shows, all history proves, from the earliest moment of recorded time, that one of the brightest attributes of human nature is that which prompts respect for the solemn scenes which surround the departure of a human soul Among all civilized people, particularly among Christian and Hebrew societies, and even among pagan nations in modern times, when the wings of the Angel of Death begin to cast their dark shadow upon a household all business is laid aside, passion is hushed, avarice is mute, footsteps are muffled, friends communicate in whispers, silence surrounds the solemn scene If the ties of blood or affection are about to be severed, tears of affection bedew our cheeks while aspirations of prayer escape our lips What do we find in this case? No sooner is the alarm given that the dread summons is approaching, than fleet horses are harnessed, a huge document is prepared bearing great seals The pretended executor of the estate of the dying man, and his unwilling beneficiary to the amount of thousands of dollars, procures a dual signature to a document giving the substantial control of every dollar of his estate to himself, and instead of standing by the bedside of his friend to show sympathy and comfort, he is seen, armed with his commission, flying back and forth to perfect his documents for two full days between Spring Valley and New York, with all the speed which nimble-footed horses and lightning express trains could afford, until we find him knocking at the door of the bankers of the decedent to seize his last dollar at the very moment when the immortal soul of that benefactor was taking its departure to realms unknown Seldom do the annals of avarice show a more depraved exhibition of human nature

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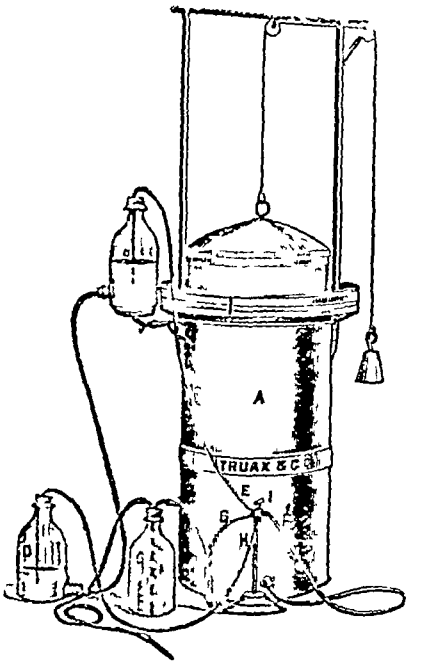
A NEW FORM OF APPARATUS FOR ADMINISTERING GASEOUS ENEMATA

Read in the Section on Medicine, Materia Medica and Therapeutics, at the Thirty Eighth Annual Meeting of the American Medical Association, June 7, 1887

BY J H KELLOGG, M D,

OF BATTLE CREEK, MICH

The phenomenal interest which has been manifested in the so called Bergeon method of treating pulmonary consumption by means of gaseous enemata, which is by no means confined to the profession, but has been largely shared by the general public, has created a most unprecedented demand for a new form of medical appliance designed to administer gaseous enemata Thus far this demand has been supplied by the simple and effective device of Dr Morel Many of those who have undertaken the extensive use of this apparatus, have experienced great annoyance by reason of the almost utter impossibility of totally excluding atmospheric air from the apparatus The inaccurate and tedious mode of using it, and the necessity for the handling of corrosive chemicals in the treatment of each individual case I encountered all these difficulties at once on beginning the trial of the new method, and was deeply impressed with the importance of designing some more exact and less inconvenient method of administering the treatment I soon designed and subsequently had constructed the simple apparatus which I herewith exhibit The special features of the apparatus consist



1 Of an ordinary gasometer similar to that used in the Waldenberg apparatus for the treatment of pulmonary diseases

2 Of 2 three-necked Wolffe's bottles The 2 bottles are connected by means of glass and rubber tubes The 2 wash bottles are connected thus The perforated rubber stopper of the middle neck of each bottle has fitted into it a glass tube of sufficient length to reach to within a quarter of an inch of the bottom of the bottle These 2 tubes are connected by a continuous tube The corresponding side necks of the 2 bottles are connected by means of rubber tubes attached to glass tubes, in the perforated stoppers of just sufficient length to reach through the stopper Each end of each of these tubes is supplied with a stop-cock, such as is used with the ordinary fountain syringe Each tube is divided in the center, and each end connected to the opposing ends of a brass tube made in the form of a T To these T's are connected, on one side, a tube leading to the gasometer or storage tank, and on the other, a rubber tube leading to a wash bottle containing water charged with sulphuretted hydrogen, as in the apparatus now in use, from which the mixed gases are conveyed to the patient in the usual way

To prepare the apparatus for use we have only to fill the gasometer with carbon dioxide and one of the Wolffe bottles with water, and all is in readiness Pressure is obtained by elevating the Wolffe bottle which is filled with water, to a height of 12 to 20 inches After elevating the bottle, open the stop cock controlling the connection between the upper bottle and the tank, and also the stop-cock controlling

the connection between the lower bottle and the mixing bottle The water in the upper bottle now begins at once to syphon into the lower bottle, and in so doing displaces the contents of the lower bottle while the upper bottle fills with CO_2 from the tank When the upper bottle is empty, it is only necessary to close the 2 stop cocks, reverse the positions of the bottles, and open the opposite corresponding stop-cocks, and the same action will be repeated

This apparatus is, of course, designed especially for office use From what I have seen and learned of this method of treatment, I am inclined to believe that it is not by any means prudent to leave it in the hands of an ordinary nurse A thoroughly trained nurse could, undoubtedly, learn to administer the treatment as well as a physician, and might safely be trusted with the treatment in individual cases, as has been suggested, but educated nurses are not abundant, and certainly ordinary nurses, which are the only ones accessible in the majority of cases, except in a few of the larger cities, are wholly incompetent to administer a remedy which has produced death in lower animals in so small doses as 1 and ½ cubic inch I am also of the opinion that the treatment may be much more successfully carried out in an office practice than at the bedside, except, of course, in cases in which the patient is so reduced by disease as to be confined to his bed or his room For cases of the sort last mentioned, the apparatus which I am describing cannot, of course, replace the Morel apparatus But I am confident that for office use it will be found very much superior to the Morel apparatus in at least the following particulars

1 Convenience A storage tank may be employed of any size desired The tank which I here exhibit holds 10 gallons and cost less than $6 The carbon dioxide may be made at any convenient time and may be kept in a tank without deterioration for almost any length of time

Another element of convenience is found in the fact that when set going the apparatus is nearly automatic The Wolffe bottles which I show here hold about 1 litre each, and consequently it is necessary to make but 1 change in the apparatus for each litre of gas employed, whereas, in the old apparatus, the physician must keep his hand continually upon the injecting bulb and give undivided attention to the management of the apparatus By the employment of bottles holding 1 gallon or more, the number of attachments of the apparatus necessary in a given treatment may be proportionately lessened

2 Comfort of the patient There has been much complaint of pain caused by the employment of gaseous enemata, and patients have in numerous instances discontinued the treatment on this account, who might possibly have been benefited if the treatment could have been continued The chief cause of pain is generally believed to be the injection of air, or the too rapid administration of the gas It is almost impossible to effect the injection of small quantities of air in the use of the Morel apparatus It is impossible to roll the rubber bag so tight that every particle of air will be excluded, and the greatest care is necessary to prevent the inclusion of so great a quantity of air as to give the patient much discomfort It is also not at all easy to maintain a constant or uniform flow of gas by means of an injecting bulb, which is necessarily intermittent This new apparatus wholly obviates both of these difficulties When the storage tanks and the 3 bottles employed are once filled with carbon dioxide it is impossible for any air to find access to the apparatus or to be injected

In filling the storage tank, the total exclusion of air may be secured by simply sinking the inner cylinder until it is wholly filled with water, while the amount of air in the wash bottles is so small that a single filling and emptying of each of the Wolffe bottles is sufficient to exclude it entirely The advantage which this apparatus presents over the Morel apparatus in this particular is as great as that presented by the fountain syringe over the old-fashioned bulb or piston syringe In the employment of this apparatus, the flow of gas is necessarily uniform, or so nearly so that no perceptible change could possibly be observed by the patient The rate of flow may be regulated to a nicety by the elevation or lowering of the bottle which is filled with water Any degree of pressure desired may be obtained I have found an elevation of 20 inches to be sufficient to overcome the pressure of gas within the bowels The time required for the injection of a litre of gas by this apparatus, the acting bottle being raised to a height of 20 inches, is from 2 to 3 minutes, with an elevation of 10 inches, the action is considerably slower The flow of gases may be instantly stopped at any moment by the closure of either one of the 2 stop cocks, which are also open When the apparatus is in action, the patient or physician may stop the flow of gas instantly by simply depressing the conducting or injecting tubes

3 Accuracy In the employment of so powerful a toxic agent as sulphuretted hydrogen, it must be evident that the matter of precise and carefully regulated doses is just as important as in the employment of arsenic, strychnia, morphia, or other agents capable of producing poisonous as well as therapeutic effects

A rubber bag and an injecting bulb can hardly be regarded as the equivalent of the balance and the graduated burette, but by means of this apparatus, the amount of carbon dioxide injected may be measured with the greatest precision It is only necessary to graduate the Wolffe bottles by which the flow of gas is actuated, and by noticing the amount of liquid moved from one bottle to the other, the precise amount of gas which has been injected may be ascertained In this respect, the apparatus seems to leave nothing to be desired The liquid employed in the bottles is simply water colored with a little analine to render the movements of the liquid more perceptible As presented here, the apparatus is in a somewhat crude form as it is the first one which I have constructed, and a more complete apparatus which I had ordered made was not completed in time to present to this meeting Nevertheless, I have been employing it for some little time, and have been much pleased with its performance

One patient to whom the Morel apparatus invariably gave a very considerable amount of pain, notwithstanding the greatest care in its use, receives the treatment from this apparatus without the slightest discomfort

I think the use of Wolff's bottles with but 2 necks and an opening at the bottom of the bottle will be found more convenient than the form which I am now using, as it will obviate the use of the syphon which fails to operate without tilting the bottle after the column of water has been broken by allowing the upper bottle to become completely empty I have also devised a more convenient and substantial arrangement of the stop-cocks which I am having constructed

I do not offer this apparatus as one which must necessarily supplant the Morel apparatus, but for office use and for careful scientific investigation it offers the elements of convenience to the physician, comfort to the patient and accuracy of dosage, advantages which must be at once appreciated by those who are at all familiar with the administration of this new mode of treatment

AIDS IN THE PREVENTION OF FEVERS

Abstract of a Paper read before the Section on Practice of Medicine, Materia Medica and Physiology, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887

BY R W SLAY, M D,
OF TILCHER'S POINT, LA

In July, 1883, I was called to see L G L, who was suffering from a severe attack of remittent fever, from which he had not been free for the past seven days By a judicious course of treatment his fever was abated by noon next day I called in the evening, and as I was cautioning him to take sulphate of quinine as I directed, and that if, in spite of the treatment, the fever should return, he must take a fluid mixture I left to be taken during the existence of the fever, he said "Can't I take some of the fever mixture whether the fever is on me or not?" I thought a moment, and as I looked upon his pale, emaciated face and knew the disastrous effects a return of fever would have upon him, and as I hoped to be able to see him again in six or eight hours, I told him to take the mixture just as he had taken it while the fever was upon him He was also directed to keep up the quinine He had no return of fever for weeks

His query and the beneficial effects of the treatment pursued made me reflect on the use more often, as preventatives, of those remedies which we use during the pyrexia I have since tried this experiment in more than 100 cases, and in every case in which the test was properly carried out, there was no return of fever I desire that you should understand that I allude more particularly to intermittent malarial fevers, but I think the day is not distant when this form of treatment can be beneficially used in obstetric and surgical cases

In recapitulation of the causes of fever we will say they are

1 Arterial contraction
2 Accelerated action of heart
3 Increased tissue metamorphosis or oxidation
4 Probably a nervous influence causing an inhibitory influence on the usual changes in transformation

If we can give remedies which will prevent the three first known causes mentioned and the last theoretical cause, we can lessen or entirely prevent the occurrence of fever, in many cases We all use these remedies in the pyrexia, and we can advantageously use them in the preventive treatment We have such remedies in veratrum viride, aconite and similar remedies Veratrum viride acts upon the cardiac ganglia and the muscular substance of the heart, as is proved by paralyzing the pneumogastric with atropia, and it still affects these parts Aconite, we are told, acts in the same way I do not mean, in using these remedies, to prohibit the use of quinine, but that their proper use, as suggested, as *aids in the prevention of fevers* Use, for instance, for an adult not very weak, this prescription

℞ Tr veratri viridi (Norwood's) ♏xxxij
Tr aconiti ♏xxxij
Spts ætheris nitrosi ℥iv
Aquæ q s ad ℥j

M

S Give, in a half wineglass of water, a teaspoonful every 3 hours beginning 9 hours before the expected return of fever, and discontinue after fever time has passed

I desire to impress upon you that I wish to recommend medicine which will prevent the four causes which I have summed up as producing fever, rather than recommend any particular medicines, for we may have our own preference for several remedies, either of which may produce the same effect One may prefer, for instance, veratrum viride to either aconite or gelsemium, while another may prefer to use aconite in preference to any of the other cardiac sedatives I wish the *principle* to be ever present to your minds, and then you have your choice of several varieties of prescriptions

ATHEROMA OF THE LEFT CORONARY ARTERY RESULTING IN ANEURISM OF THE APEX OF THE LEFT VENTRICLE

Read before the Chicago Medical Society, June 6, 1887,

BY ROBERT TILLEY, M D,
OF CHICAGO

As this subject is so little associated with my usual practice it is with some hesitancy that I present even this short report Aneurisms of the heart, however, are not common in clinical reports, and I trust that fact alone will justify the presentation of the case

The patient was an intimate friend of mine, and it was only at his special request that I took charge of the case He was 57 years of age, and his occupation was that of a lawyer His previous life was unexceptionally exemplary He did not use tobacco in any form, and was exceedingly temperate and methodical in all his habits, his carriage was such as

to suggest the impossibility of any hurry on his part His general build may be characterized as corpulent, although when young he was very thin At the age of 30 he was declared to be dying of consumption Recovery, however, seems to have occurred without medical assistance

An ill defined malaise extending over a period of six weeks or two months suddenly increased to such an extent on the 20th of October, 1885, that he was unable to leave the house and was obliged to call assistance This malaise consisted of wandering pains, not severe, over the chest extending to the left shoulder and down the left arm, sometimes reaching the wrist They were not periodic, and could not be associated with any definite act of daily life, but would rather come on when any change of action was about to take place

He first called my attention to this, thus "I don't know whether I want to follow a doctor's directions or not I get occasionally flying pains over my chest and in my left shoulder, but on walking about a little I can make them disappear" As he always had a marked antipathy for medicine of any kind, and I did not possess any firm conviction of any greater benefit likely to follow anything I could suggest than the benefit he claimed from exercise, I told him to continue to use the method he had found successful, and report later At this time I had no conception of the existence in his case of atheromatous coronary arteries, nor did I suspect that the wandering pains were associated with incipient angina pectoris

About six weeks after the interview above referred to, an acute attack of difficulty of breathing, associated with severe coughing and anxiety of countenance, came on From this time he did not leave the house only for short walks The pulse at this time was 120, feeble but regular Breathing very laborious Could not lie down on the back or left side, and only for a short time on the right side Cough was very troublesome No special features present in the alimentary canal On percussion no perceptible enlargement of the heart was detected, percussion also failed to reveal any enlargement of the liver On auscultation the heart revealed no definite abnormal sounds The principal feature which I observed was that of a systole, the ventricles seemed to stop as though shutting down on a pledget of wool I find that Constantin Paul refers to this symptom very definitely as associated with aneurism, or what he calls false aneurism, of the heart It certainly struck me as the one striking feature of the case There was at this time no œdema, no fever, no albumin in the urine

From the beginning his condition was considered grave, and consultation was obtained from the first Drs H A Johnson and R H Babcock both saw the case, and the former remained as consulting physician to the end The various heart tonics, such as strychnia, arsenic, and digitalis, were used with no demonstrable effect except this, that when the digitalis was increased so as to diminish the frequency of the heart's action, the action became so tumultuous and incoordinate that it was deemed best to let it beat at the gait that it found most convenient In about a fortnight after the commencement of the acute attack anginal pains became more prominent, and atheroma of the coronary arteries was suspected There was no evidence, however, of any atheroma of any superficial vessels From this date a bottle containing carbonate of ammonia and camphor became his companion, supplemented with small pellets of nitro glycerine, 1-100 of a grain The latter gave more satisfaction than the nitrite of amyl The anginal pains were not at any time characteristic for their severity, but the pallor of countenance and anxious expression were characteristic Later on the feature of asystole was not so well marked The feet had exhibited, on several occasions, a tendency to œdema, but about ten days before death it began to increase rapidly, and no remedies were found capable of removing it The œdema extended gradually to the hips, abdomen, and chest, and about nine weeks after the acute attacks, while walking across the room, he fell dead

I would like to remark here that he derived marked comfort from gentle exercise with fresh air When the sidewalks were covered with ice so that he could not possibly walk out of doors, he would wrap up and walk in a room with the windows wide open Nitro glycerine and carbonate of ammonia were the only remedies that gave him any appreciable relief

The autopsy, which he himself requested—he had a horror of being buried alive—reveals nothing remarkably peculiar except the condition of the heart This autopsy was performed on the day following the death, by Dr Frank Cary in the presence of Drs H A and Frank S Johnson, R H Babcock and myself The heart was somewhat enlarged, all the valves were competent, there was little or no atheroma manifest except in the coronary arteries One of these I show you almost completely occluded It was just below this manifest atheroma of the left coronary that in the wall of the left ventricle near the apex the aneurism had developed I should characterize it as about the size of a large walnut The wall of the heart in the thinnest part was estimated by Dr F S Johnson as only two millimètres thick The aneurismal cavity was filled with blood, part of which showed signs of organization and part signs of disintegration The clot was evidently formed at two different periods The microscopic sections for which I am indebted to the kindness of Dr F S Johnson shows this well There were no signs of chronic endocarditis, but some of slight chronic myocarditis

Bramwell divides aneurisms of the heart into acute and chronic Constantin Paul calls such cases false aneurisms, and then adopts the same division "Acute Aneurism," says Bramwell,[1] "may result from anything which causes rapid local softening of a limited portion of the cardiac wall Acute ulcerative endocarditis, acute localized myocarditis and acute softening the result of thrombosis of the coronory arteries are the conditions which are most likely to cause acute local dilatation of this description"

[1] Bramwell Diseases of the Heart p 576

"Chronic aneurisms of the heart," he continues, "are almost always the result of chronic myocarditis Fatty degeneration seems to be an occasional though extremely rare cause of this condition" He nowhere calls direct attention to an atheromatous condition of the coronary arteries as a cause Constantin Paul speaks of a case under his observation where there was an atheromatous condition of the aorta and he supposed this to be the starting point in the case that he reports

Dr Mary Putnam Jacobi says (in Wood's Reference Handbook) "The essential cause of heart aneurism is thus identical with arterial aneurism, the lesion of structure is however different as might be expected from the difference of tissue in the heart and arteries In the latter, that is, the arteries, non-traumatic aneurism nearly always depends on atheroma, in the former upon fibroid disease the result of chronic interstitial myocarditis"

In the present case, I think, there is no doubt that the starting point was the diminished calibre of the left coronary artery by this atheromatous condition diminishing the supply of nutriment to the corresponding tissue and thus producing the extreme thinness of the walls in the part supplied by the artery The clot of blood was probably the result of the incapacity of the left ventricle to completely contract and expel its contents and probably occurred in part at the time of his acute sickness about 9 weeks before death

The presence of this clot of blood fully explained the characteristic sound which I clearly recognized at the first and which I described as though the ventricle contracted on a pledget of wool

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COCKLE-BUR REMOVED BY TRACHEOTOMY FROM THE LARYNX

Read before the Medical Society of the District of Columbia, May 4, 1887

BY J FORD THOMPSON, M D,

OF WASHINGTON, D C

W D, white, æt 16, admitted to Children's Hospital, 8 30 P M, April 20, 1887 He was brought to the Hospital by Dr Stone, of Brightwood He was playing ball, having a cockle-bur in his mouth, which he drew into his larynx by a deep inspiration following violent exertion Violent coughing ensued, accompanied by bloody expectoration, total aphonia, and considerable dyspnœa Dr Stone saw him immedtately after the accident, but was unable to remove the bur with the instruments at hand Concluding that tracheotomy was called for he brought the boy to the hospital, having telephoned me to be on hand to operate

When I saw him he was breathing so quietly and easily that I doubted the presence of any foreign substance in the wind pipe, although there was tenderness about the larynx and he would not make an effort to talk I passed an œsopheal bougie down to the stomach without result I then passed my index finger into the larynx and readily detected the bur Free emesis followed, but no relief Considering it a case for extracting by the aid of the laryngoscope, and not having the necessary instruments in the hospital at the time, I determined to take him to Dr C E Hagner's office Dr Hagner and Dr Murray, who happened to be present, examined him and readily saw the bur Dr H made repeated efforts to extract it but failed He was sent back to the hospital with instructions to watch him closely during the night and to administer bromide of potassium, and apply wet cloths to the neck

April 21 10 30 A M Had passed a fairly comfortable night, refused to take any nourishment Present Drs Hagner, Triplett, Stone, Cutter, Mundel and the house assistants Dr Hagner used the mirror but did not see the body, considerable mucus in larynx He was still breathing easily, with no cough I decided to open the trachea at once After chloroform was administered, I cut through the two upper rings of the trachea, and as this opening was not sufficient, I extended it through the body of the cricord I inserted a loop of silk to each side of the cartilage to keep the wound open, as they were less in the way than the retractors I made every effort to detect and grasp the body with tracheal forceps but failed I then introduced the index finger of my left hand into the larynx and readily felt the bur, which was to the left side, probably in the ventricle I introduced the curved forceps through the wound and dislodged the body, and with the aid of the fingers in the larynx pushed it upwards and extracted it through the mouth I inserted a tube which was left in for 24 hours

April 22 —Rested well during night Temp 99° Tube taken out

April 23 —Doing well Lower part of wound healed by first intention, the tube opening left to heal by granulation

April 24 —Speaks in his natural tone, appetite good

April 30 —Discharged cured

I would call especial attention to the ease and thoroughness of exploration of the larynx by the fingers as shown in this case I scarcely believed it possible before to do it so readily and so satisfactorily

Other cases reported are

1 Cockle-bur in larynx Drs Brown and Van Note S C, æt 11, running across a field, fell, cockle-bur flew in mouth and into larynx Respiration labored and voice of a croupy whisper Introduced probang into stomach to be sure it was not in œsophagus Could not remove with forceps so 48 hours after accident performed laryngotomy Bur in right ventricle Recovery

2 Cockle bur in larynx S T Armstrong, M D, Asst Surg U S Marine Hospt Service, Memphis, Tenn S Miller, colored, æt 11, while running in a field with mouth open inhaled cockle bur which was blown by wind Oct 14 Breathing difficult, deglutition painful Palliative means used by a physician of Memphis Dr A saw him in consultation at 16 Curved forceps used but failed They were then introduced through incision but failed to dislodge or grasp it Finger introduced in mouth

and with aid of forceps through incisions brought out through mouth

3 Cockle bur in larynx Geo W Norman, Sweet Mills, Ky, Oct 24, 1879 Bur lodged in larynx by inhalation during some exertion Free vomiting and coughing failed to dislodge it Tracheotomy was performed next morning and wound left open 6 days At the end of that time it was coughed up Recovery

MEDICAL PROGRESS.

ARTIFICIAL AND COMBINED DRAINAGE OF THE BLADDER, KIDNEYS, AND UTERUS THROUGH THE VAGINA, WITH AND WITHOUT GRADUATED PRESSURE —DR NATHAN BOZEMAN, of New York, read a paper on this subject in the Section on Gynecology of the IXth International Medical Congress He described an instrument which he had devised recently This draws the uterine away from the mucous membrane, and in the most perfect manner He has also been able to combine in the same instrument drainage with the dilatation of the cicatricial tissue of the vagina The form of the instruments which concerns us here is intended for drainage alone, and I have called them intra vaginal and vulvo vaginal drainage supports The intra-vaginal instrument is applicable in most cases to all positions of the body The vulvo vaginal form is suited to the recumbent position, and to cases where the perineum is lacerated These can be introduced and removed by the patient when necessary They are small and simple, free from angles and sharp bodies, are readily kept clean, and excite no discomfort or irritation of the vagina They do not press on the rectum or vagina, nor do they interfere with locomotion

The author closed his paper with the following conclusions

1 The importance of completion of the operation for fistula has not been duly appreciated This forms, in many cases, the principal difficulty in the successful performance of the operation for the closure of the fistular opening In other cases, when the fistula is cured, but the complications left without treatment, they lead sooner or later to the death or suffering of the patient The greatest care should therefore be taken to discover and remove them

2 Kolpokleisis, occlusion of the os uteri, and incision of the cervix in the bladder or rectum, are unjustifiable operations They destroy the functions of the generative organs, lead to cystitis, then form venereal and vesicular calculi, pyelitis, and other diseases Moreover, they are unnecessary By means of the preparatory treatment of the complication by the aid of my button suture and my dilating speculum, I have been able to overcome all the difficulties which have been described as indications for operation

3 The association of combined drainage in the dilatation of the vagina is a great improvement The inconvenience and evil effects of incontinence of urine are thereby lessened, and the duration of the treatment shortened by the more rapid healing of the incisions and the formation of less cicatricial material in the reparative process

4 We now propose a means of palliating the suffering due to incontinence of urine in a small proportion of cases of fistula which are incurable by this method—even the dangerous one of kolpokleisis I believe that some form of drainage may be instituted in every case, and the patient may be thus restored to enjoy life and the performance of its duties

5 The possession of a system of combined drainage will widen the scope of the operation of kolpocystotomy, done for cystitis, by removing the evils of incontinence of urine, now the chief objection to its performance

6 Finally, I think the operation which I call kolpourethro cystotomy, followed by the exploration and treatment of the disease of the uterus and pelvis of the kidney, has a brilliant future before it In the treatment of pyelitis, renal calculi, and obstruction of the ureters, it will restrict within narrow limits the operation of nephrotomy and nephrectomy

DR GRAILEY HEWETT, of London, said The paper just read had shown decided advance in this line of thought Conservative surgery, in this our day, seems to be running a race with operative surgery He endorsed the views of the essayist thoroughly—*Medical Record*, Sept 10, 1887

GALVANISM IN PRURITUS VULVÆ —DR H VON CAMPE, of Hanover, reports the results of a mode of treatment to which his attention was directed by a communication from W Blackwood, which first appeared in the *Polyclinic*, 1885 Von Campe was consulted in the beginning of August, 1885, by a woman aged 53, who was suffering from an intense itching of the vulva, groin, perineum and anus The patient had always been healthy until 2½ years after an abortion, when she had irregular discharges of blood from the uterus, to remedy which the organ was curetted After the curetting the discharges of blood never recurred, but she suffered from a profuse acrid discharge In spite of various modes of treatment the condition was not remedied, but itching began in the vagina and extended gradually over the mons veneris, groin, perineum and anus The patient consulted various physicians, one of whom even excised portions of the integument where the irritation was most intolerable, but no measure of treatment resulted in more than slight temporary relief She had long employed injections and solutions of carbolic acid and sugar of lead, but with only slight effect

After trying salicylic ointments and cocaine, which alleviated the distress for only a few hours, von Campe resorted to galvanism on September 21, using at first a current from 6 elements with the anode applied to the vulva and the cathode to the affected portions of the integument The sittings lasted 10 minutes A weak solution of carbolic acid was also prescribed, to be employed night and morning Two days later the patient reported that the pruritus left

her immediately after the application of the current and that she had enjoyed a respite of several hours The patient was then subjected to the galvanic treatment on the three following days, during which time her condition improved Six more applications were made before October 8, with a current from 8 elements, and at this time the pruritus had nearly disappeared, leaving only a slight prickling pain The integument had healed over in spots and the skin looked quite natural The patient reported that she was able to sleep all night for the first time in five years Two more applications of galvanism were made before October 16, by which time the pain had quite disappeared and the skin had nearly healed Treatment was reapplied on October 24, 25 and 26, from which time until November 20 she was entirely free from the pruritus Then experiencing a slight return of the trouble, she returned and the parts were again galvanized several times, after which the affection of the skin entirely disappeared Since then the patient has often been heard from Pruritus is occasionally felt, but only in a slight degree For the most part the discharge has continued, but it is much less profuse Both conditions are easily controlled by the use of weak douches of carbolic acid —*Centralbl fur Gynakol*, No 33, 1887

ACTION OF QUININE AND ALLIED SUBSTANCES ON CONTRACTILE TISSUES —In a paper on this subject read at the late annual meeting of the British Medical Association MR R B WILD draws the following conclusions from a series of experiments

To summarize the results of my experiments, I believe that quinine acts essentially in the same manner on all forms of contractile tissue In small doses it stimulates, as shown in the heart, the increased height of contraction of voluntary muscle, and the initial contraction of the vessels

In larger doses, or after longer action of small doses, it completely paralyses the contractile power of the tissue, this is seen in the arrest of amœboid movement, the cessation of response to stimuli in voluntary muscle, the stopping of the heart in diastole, and the dilatation of the vessels

In very large doses, or after very prolonged action, quinine causes contractile tissues to pass into a state of rigor mortis, as shown by the small spherical condition of leucocytes, the rigidity of voluntary muscle, the contracted state of the heart, the secondary contraction of the vessels after long exposure to the poison, and the contracted state of the œsophagus

Voluntary muscle (that is, the tissue in which contractility is developed to its greatest extent) was most susceptible to the action of quinine, and was thrown into rigor mortis by solutions which produce paralysis only of the less specialized tissues, with strong solutions (for example, 1 000) voluntary muscle passes into rigor mortis so rapidly that the period of paralysis is abolished, and the tissue, after a short period of increased contraction, passes directly into a rigid and contracted condition

I have not the time to enter into the action of other drugs allied to quinine, shortly, I found cinchonine to act like weaker solutions of quinine, cinchonidine had a similar but more powerful action on voluntary muscle than quinine, quinidine, on the other hand, acted as a direct depressant, the muscle dying with great rapidity —*British Medical Journal*, Sept 3, 1887

COLD WATER IN TYPHOID FEVER —DR S P ALLEN, of Whitney's Point, New York, says The following conclusions, which were given by Dr Austin Flint, after closely watching the effects of cold water externally in the treatment of 17 cases of typhoid fever that came under his care in Bellevue Hospital some years ago, are sustained by the results in 13 cases that occurred in my practice since that time

1 That by the use of cold water externally in cases of typhoid fever the temperature of the body may, after a variable time of its continuance, be reduced to 102°, or even lower

2 After a period varying very much in different cases, and also at different times in the same case, the temperature rises as high or higher than before the reduction

3 Upon repeating the employment of cold as often as the axillary temperature exceeds 103°, the number of repetitions necessary is extremely variable in different cases

4 The sponge-bath, with the wet sheet and sprinkling, may be employed to the exclusion of the bath tub in the treatment of typhoid fever

5 These modes of employing cold water may be continued sufficiently long for the reduction of the temperature to 102°, or even lower, and repeated as often as may be required, without fear of injury And the study of these cases furnishes no ground for supposing that a liability to complications or accidents is thereby increased, and that the reduction of the temperature by these modes, as often as it rises above 103°, improves the condition of the patient

6 The results of the analysis of those cases where cold has been faithfully used, afford us encouragement to employ it with the expectation of diminishing the severity of the disease and its danger to life —*Medical Times*, Sept 3, 1887

SPARTEINE, A HEART STIMULANT —LANGGAARD reports the following formulæ, which he found useful in 18 cases of heart diseases

℞ Sparteïn sulph gr 6
Pulv rad liquirit
Succ liquirit ää q s
Ft pil 20 in num
Sig One or two pills from 2 to 4 times daily

Also

℞ Sparteïn sulph gr 3 to gr 7
Ad destill ʒ 2½
Solve
Sig Twenty drops, from 2 to 4 times daily, in sweetened water or wine

℞ Sparteïn sulph gr 3 to gr 7
Syr aurant cort ʒ 12½
Solve
Sig A small teaspoonful in water, from 2 to 4 times daily
—*Therapeutische Monatschefte*, June, 1887

THE
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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, OCTOBER 1, 1887

THE PHYSIOLOGY OF DERMATO THERAPEUTICS

Dermatology is a subject to which the general practitioner probably pays less attention than he does to any other department of medicine, except, perhaps etiology—a fact which is most probably due to the little attention given to the subject in the college courses Yet our readers may be interested in an analysis of a paper read at the late annual meeting of the British Medical Association by one of the great masters of dermatology, DR P G UNNA, of Hamburg For many years there has been a vast amount of discussion as to the absorptive power of the skin, and it is not very long since physiologists carried the day against the balneologists and general practitioners, and proved that the absorptive power of the skin is very limited But while it has been shown that indifferent salts, applied to the outer skin in the form of ointments, pass into the circulation in very minute quantities, we have at the same time learned that volatile substances, and such as attack the horny layer of the skin, even to the slightest extent, are absorbed by the skin without difficulty With this fact before us we must arrange our medication on this principle when we wish to pass through a thickened or normal horny layer in order to reach a deep seated focus of disease

Of course what has been said of the limited absorptive capacity of the skin does not hold good when there is no horny layer to deal with, as in cases of ulcers in which the papillary layer is necrosed, or in pustular processes, burns and wounds, or in cases in which the upper strata of the horny layer are absent, though the basal cells are still present, but swollen, as in eczema, pemphigus and other bullous affections It should be borne in mind, however, that the horny layer itself is not what prevents the absorption of certain substances through the skin, but its property of attracting and absorbing the skin fat, which renders it impermeable But in the majority of skin diseases we have to take in account an absorptive power of the skin or what is left of it, that is greater than the normal While the natural horny layer opposes the entrance of medicinal substances, the diseased portions of the skin take them up readily, and the drugs act more promptly and powerfully on these than on the healthy portions of the skin Again, the diseased skin " controls up to a certain point the selective action of the drugs and regulates their effects, so that it is the morbid portions which are chiefly affected " This selection of diseased organs for remedies which are intended to act on them is not an infrequent occurrence But it is not enough to bring the needed drug in contact with the surface In some cases the horny layer is normal or hypertrophied, and yet an intense penetration is very necessary, in order to remove deeply situated germs of a fungoid nature, and of an infectious kind, such as lupus, lepra, lichen ruber, psoriasis, furunculosis Again, there are many dermatoses in which at least a part of the horny layer is laid bare, but in which the absorption—the centripetal suction—of the drugs is opposed by the strong centrifugal floor of the tissue-juices permeating the swollen scarf skin Such cases are weeping eczemas, impetigenous eruptions, ulcers (as of lupus), and all profusely secreting surfaces The mode of application of the medicine in these cases is of great importance, and in many cases treatment gives only failure, because of the insufficient consideration of the peculiarities of the skin in the particular cases, as regards the form and manner of applying the remedies

The agents used as applications to the diseased skin may be classified as chemical and mechanical, the former being used to modify the skin in the way desired The most important keratolytic agent known is salicylic acid, being far more certain and controllable than soap or caustic potash, though in some cases it is not applicable while the others are To harden the swollen and defective horny layer, on the other hand, and make it thicker and drier, so that it may be able to take up more fat, we use such keratoplastic agents as sulphur, ichthyol, resorcin, sugar, linseed oil, and all the reducing agents In these cases there is a reduction or withdrawal of oxygen, and the keratoplastic action is limited to cases in which these agents are used in dilutions of definite weakness, and if this limit be exceeded the keratoplastic action

ceases, and a keratolytic action begins These keratolytic and keratoplastic substances are now extensively used, either as independent remedies or as adjuvants or correctives to other drugs, and when the physician makes a proper choice and combination of them his labor is much lightened

The mechanico physical therapeutics of skin diseases consists in using the volatile and gaseous substances that pass readily through the horny layer of the skin To these may be added substances, themselves but little volatile, which are readily soluble in such volatile vehicles as ether, chloroform and benzine, hence the proposal of the spraying on the diseased skin of drugs dissolved in these vehicles, a method to which but too little attention has been paid Not only can the horny layer, impregnated by fat, be penetrated by means of the volatile spray, which dissolves out the fat, but when this is used on a deficient and swollen horny layer it has a drying effect by causing the abstraction of water Unna has often cured eczemas by means of the pure alcohol spray, and superficial *fungoid affections with the chloroform spray* "The oleates, the powers of which when used in salves are often over-estimated, attain their highest utility when employed in solution in the ether spray"

There are certain physical means also, to understand the application of which one has to remember the anatomy and physiology of the skin The principle underlying these methods is that the products and secretions of the skin, which are notably partly of a fluid and partly of a fatty nature, are either accumulated or got rid of by artificial means Practically we need consider only three products of the skin 1 The water-vapor or insensible perspiration, which is continually evaporating over the surface of the body 2 The watery sweat 3 The fatty sweat The first makes up about 77 per cent of the whole water evaporation of the skin, and can only be suppressed by a warm or a steam bath, its suppression being compensated for by a large increase of the watery sweat By means of a partial stoppage of this we can soften the horny layer But it is much easier to cause retention of the fluid sweat, both watery and fatty, for example, by a permanent water-bath, which causes an accumulation of fat in the upper skin, and this keeps back the watery secretion, and much better in normal conditions than inunction with fats But in many skin-diseases watery secretion is enormously increased by over-filling of the papillary vessels, and in such cases inunction is of service the redness and inflammation of the eczema or rosacea may be increased by the fatty substance, but this maceration and higher temperature may be just what is desired, and the fat should be put on in a thick layer But by the use of gutta percha or india rubber the secretion may be still more completely retained In this way the upper skin is completely soaked with water, and the horny layer becomes like the epithelial lining of the mouth At the same time it contains but little fat, and is very permeable, and non-resistant to watery solutions It is a mucous-like substance When we wish to obtain the greatest possible effect of a drug upon the skin, therefore, it must be applied under an impermeable covering

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Under certain circumstances, again, it may be desired to extract and eliminate the masses of fatty and watery secretion when they are formed in abnormally large quantities, as is the case in some skin diseases Here we apply dry porous substances to the skin, so as to cause rapid absorption of the water and fats, such as rice-powder, and the pastes and gelatines now extensively used As the most vigorous absorption through the skin takes place under impermeable coverings, so with these powders, pastes and gelatines, when incorporated with drugs, absorption through the skin is reduced to the lowest limits They strengthen the centrifugal stream of secretion, and thus bring the centripetal, or stream of absorption, to the lowest limit They dry up the horny layer, and thus increase the difficulty with which fluid substances pass through it If, therefore, we apply volatile substances in the form of pastes and gelatines we can only look for deeply penetrating effects, and as they volatilize more easily towards the air than through the skin, it is injudicious to apply them in this manner Under the impermeable coverings, therefore, the watery elements at once get the upper hand, while under porous bodies the fatty elements are stored, while the watery pass through and are quickly evaporated Both these kinds of preparations act, therefore, on the stream of secretion, the one restricts secretion and favors absorption through the skin, the other promotes secretion and reduces the power of absorption through the skin The different methods are mutually complementary, and cannot replace each other "Only he who has them to a certain degree at his command can say that he knows and can make use of the modern method of dermato therapeutics"

EXTIRPATION OF THE UTERUS IN CARCINOMA

PROFESSOR HEINRICH FRITSCH has recently contributed (*Centralblatt fur Gynakologie*, No 25, 1887), the tabulated results of 60 operations for total extirpation of the carcinomatous uterus From

his paper it appears that 10 per cent of the patients died from the effects of the operation, a mortality which corresponds to that of laparotomy in general Of the survivors 20 thus far remain without recurrence, in 2 cases a period of more than 3 years has elapsed since the operation, in 7 cases more than 2 years have elapsed, while most of the other patients have already passed the most dangerous period—the first 6 months From this Fritsch makes the point that after total extirpation of the carcinomatous uterus recurrence occurs less frequently than after operations for carcinoma in other localities, the reason for this being, probably, that the advance of the carcinomatous process in the lymphatics and the formation of metastases takes place much less readily in the case of the non active uterus than in the case of such an active organ as the breast, which makes strong demands on the lymphatics This view is confirmed by the comparative infrequency with which the disease returns in multiparous and old women

As regards the operation, a necessary condition is movability of the uterus Parametric fixation prevents the drawing down of the uterus, but pelvic fixation does not The size of the carcinoma is of less consequence Especially unfavorable are those cases in which the uterus itself is destroyed, and the parametrium infiltrated, while the portio vaginalis remains healthy, since in such cases a recurrence of the disease is unavoidable, and it is better to abandon the operation, according to Fritsch Even the hope, which he formerly entertained, that pain would be removed even though the disease returned, has not been realized, for cancerous nodules develop in the rectum, giving rise to excessive pain The field of operation, he says, is most readily made apparent by cutting into the parametrium, and if nodules of cancer be found here the operation must be abandoned Fritsch's method offers great advantage in that it begins with lateral incisions, the peritoneum not being opened until later in the operation, so that if the parametrium be found diseased the operator may stop, tampon the wounds with iodoform gauze, and leave the patient in no worse condition than before If it be found difficult to draw down and remove the ovaries Fritsch leaves them *in situ*, even in the case of women who still menstruate But usually after the removal of the uterus a slow steady pull on the ligatures suffices to bring the ovaries down

The opening in the peritoneum is not sutured, but is merely closed by an iodoform tampon, and in using this method Fritsch has never had any trouble from prolapse of the intestines It is not necessary after the operation that the patient maintain any especial position in order to facilitate the escape of the discharges, but she has simply to lie on her back

A moderate increase in the size of the uterus does not materially increase the difficulties of the operation, provided the operator remember to draw down first on one angle of the uterus and then on the other But the presence of myomata may render the removal of the organ *per vaginam* impossible In such cases a laparotomy must, of course, be performed, and does not greatly increase the danger of the operation In some cases Fritsch has found a vagina so distensible that he was able to draw through it a uterus as large as a child's head In such cases the danger of wounding the bladder is of course increased, and should this accident occur the wound must be closed immediately But if a wound be not discovered until after the operation it is better to leave it until the patient has recovered from the first operation The ureters are seldom injured during the removal of the uterus

In regard to prognosis, a rapidly recurring carcinoma will always appear in the cicatrix, while if it does not recur until later it will be found to affect the ligaments by preference A smooth transverse cicatrix in the vagina gives a better prognosis than a hard irregular one In order to improve the prognosis of this operation, which has already been shown to be justifiable, the cooperation of general practitioners is necessary, so as to bring the case to operation as soon as possible

CREASOTE IN PHTHISIS

According to the *Medicinische Chirurgische Rundschau*, No 6, 1887, Dr Sommerbrodt, of Breslau, has reported 5,000 cases of pulmonary tuberculosis treated with creasote, all being ambulatory cases, the series extending over nine years A number of patients were treated with Bouchard and Gimbert's formulæ, 27 per cent recovering Other formulæ used were 13 5 parts (?) of creasote to 1 quart of alcohol or Malaga wine, 2 parts of creasote to 150 of cod liver oil The dose of these preparations was the same, from 3 to 5 ♏ of creasote being taken daily Another formula used was creasote 3 5 parts, alcohol and water of each 125 parts, one teaspoonfull twice daily in a glass of water This was used in 30 cases The best results were obtained from the following Gelatin capsules, each containing ♏ ¾ of creasote and ♏ 3 of balsam of tolu On the first day of treatment the patient took one of these

capsules, two on the second day, and for eight days afterwards three were taken with water after meals In the second week four capsules were taken daily, in the third week five capsules daily, and in the fourth week six daily, after the principal meals of the day Given in this way the drug was well borne as a rule This medication was frequently continued for a year, and sometimes combined with favorable climatic treatment It was in young patients that the best results were obtained, and in the first stages of the disease, with symptoms not well defined Good results were also obtained in scrofulous affections of glands

The drug seemed to relieve irritation and cough, in many cases to such an extent that narcotics could be dispensed with Bronchial secretion and night sweats were also diminished Sommerbrodt says that the drug must be taken for three months or a year, and that the more of it taken the better the results With such an array of cases as he presents, and with the results he has obtained, it certainly seems that the method is well worthy of trial

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CHOLERA —It is well known that this disease has recently been on the increase in some parts of Italy and the Island of Sicily The first importation of well-marked cases in our country was made by the steamship "Alesia," from Naples, Italy, which arrived at the New York quarantine on the night of the 22d September, 1887, with four cases of cholera on board Eight deaths from the same disease had occurred during the voyage Prompt measures were taken to retain the passengers in quarantine, the sick in hospital, and to have the ship thoroughly disinfected and cleansed It is not probable that, at this season of the year, the disease will extend beyond those belonging to the ship

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A SANITARY CONVENTION, under the auspices of the Michigan State Board of Health, will be held at Owosso, Michigan, November 22 and 23, 1887 The first session will commence at 2 P M , of the 22d, and will be free At each session papers on subjects pertaining to the public health will be read and discussed, in such manner as to interest and profit all classes of citizens For further information address Dr A M Hume, Secretary, Owosso, Mich

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YELLOW FEVER —The prevalence of this disease at Key West, Fla , appears to have run its course and ceased without extending to other places No new cases were reported for the week ending September 22, and only one death

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY

Stated Meeting, June 6, 1887

THE PRESIDENT, WM T BELFIELD, M D , IN THE CHAIR

DR FRANK BILLINGS exhibited a very interesting collection of

BACTERIAL CULTURES

and explained the mode of their culture, and gave the name and description of each bacterium

THE PRESIDENT asked whether this method of culture was not of extreme value in differentiating the different sorts of bacteria one from another, and whether this did not enable investigators to distinguish the different sorts of bacteria

DR F BILLINGS At the present time there are three comma bacilli that are well-known the comma bacillus of Asiatic cholera, discovered by Koch, the one discovered by Deneke in old cheese, and the one discovered by Finckler and Prior These under the microscope look so much alike, that one would not dare to differentiate between them, but their growth in gelatine tubes is so characteristic that one can easily tell the difference The cholera bacillus grows upon the plate in a peculiar granular colony, that does not make the gelatine fluid so quickly as the bacillus of Finckler or Deneke Finckler makes the gelatine in tubes, fluid from above downward, first where the needle is run into it and again at the top Those found in old cheese make it fluid in the same way, but less quickly, while the cholera bacilli grow in a characteristic funnel-shaped form Then of the staphylococci, there is the styphylococcus pyogenes aureus, the staphylococcus pyogenes citrius, and the staphylococcus pyogenes albus, these are called white, orange and lemon color by their characteristic growth on culture media, *in time* one will be white, one orange and one lemon color, but in the first week one could not tell the difference It is quite as important to know how to cultivate bacteria and detect the difference in growth as to know how to differentiate bacteria with the microscope by their form and their reaction to the aniline dyes

DR LESTER CURTIS read a paper on

CALCARIOUS CONCRETIONS IN THE EXTERNAL EAR

The following case, occurring in an old patient of mine, has seemed to me to be unusual I had treated the patient for several years for slight ailments, chief of which was an occasional malarial attack that gave me some trouble on account of her inability to take quinine

In August, 1886, she called my attention to a painful swelling in the external meatus of the right ear I considered it to be a case of ordinary superficial inflammation of the meatus and directed instillation of a solution of morphine The pain at once ceased, and in a day or two the swelling sub

sided, and I supposed that the trouble had resolved, as has usually occurred in my experience after such treatment But a little swelling and tenderness remained In about two weeks, without further symptoms than a trifling uneasiness, there was a discharge of a drop of purulent fluid which I am sorry that I had no opportunity of examining I paid no more attention to the case until about a month after this, when she called at my office, and told me that the same morning the ear had felt a little uncomfortable, and on picking it, a calcarious mass about as large as a millet seed had come away A day or two before she had removed a similar mass These masses, she said, resembled lumps of old lime as nearly as anything she could think of On examining the ear I saw a red and indurated place about half way down the meatus, in the upper portion of the posterior wall In the middle of this spot was a pit about as large as the mass removed, and surrounding the pit a greater or less amount of a white granular substance which grated against the probe and was of stony hardness I attempted to detach some of it with the sharpened end of the probe, but it was firmly adherent, and appeared to be infiltrated throughout the tissue, and I succeeded in getting away only a few small flakes Besides this nothing unusual was detected in the ear with the exception of a slight redness of the posterior rim of the drum head The hearing was perfect A slight feeling of irritation was noticed for some weeks, but gradually passed away At present, so far as I can discover, the ear is quite normal

I do not think that there is any possibility of the concretion being a foreign body, nothing with the exception of the morphine was introduced into the ear, and that could hardly have produced such an effect, besides, part at least of the substance was infiltrated among the tissues of the meatus Superficial abscesses in which there is a free discharge of pus do not undergo calcareous degeneration The appearance was that of a gouty concretion, and there is a trace of gout in the family Her father, though an active and abstemious man, having had slight attacks of the affection, but she has never had any gouty symptom that I have been able to discover, and gout does not suppurate I have never heard of a case like this, and the somewhat limited amount of literature on diseases of the ear, accessible to me, makes no mention of anything of the kind

Dr R Tilley thought the author should have examined the concretion microscopically and determined its nature For himself he was of the opinion it was probably composed of dried epithelia resulting from a partially absorbed furuncle

Dr Lester Curtis I have no special reply to make to the conjectures I never examined the ear of the patient before this thing occurred but I have examined both ears since that time and so far as I could see there was nothing in the shape of a sebaceous cyst in either ear One would naturally suppose that if such things occurred there would be more than one of them I would imagine if one should occur in such a locality there would be likely to be others One word in regard to treatment I used, which I have recommended in a considerable number of cases and always with benefit While I have never used the rubber tube, I have seen a good many cases where I would not venture to insert it The solution of morphine will quiet pain in every case And in every case I have happened to meet, it has stopped the inflammation and the pain has not recurred

Dr W L Axford I would suggest that the case was one originally of sebaceous cyst, that the contents of the cyst had undergone calcareous changes and afterwards inflamed I have seen that happen in the head but never in the ear

Dr W L Axford read a paper for Dr O G Miller on

A GUIDE FOR THE OTIS' URETHROTOME,

in which the mechanism and workings of the guide were fully described

Dr R Tilley reported a case of

ATHEROMA OF THE LEFT CORONARY ARTERY, RESULTING IN ANEURISM OF THE LEFT VENTRICLE

(See page 430)

Dr Robert H Babcock It was my good fortune to see the patient to whom Dr Tilley has referred this evening, and as it was a case of remarkable interest and there are several points illustrative of the peculiar symptoms due to atheroma of the coronary arteries and also illustrative of the difficulty, many times of diagnosticating the condition, I would like to refer to them The first symptom mentioned by Dr Tilley as important was that of angina pectoris, and herein this case was peculiar, the pains were flitting and were relieved by gentle exercise It was wholly characteristic, however, in that the pain extended to the left shoulder and down the left arm That is the characteristic pain of angina pectoris, although there are so many deviations from it that angina pectoris frequently passes unrecognized by the general practitioner There is a liability oftentimes to mistake angina pectoris for neuralgia of the stomach I have under observation a case where the pain has been considered for years gastralgia, but it is without doubt angina pectoris, the arteries are atheromatous and there are characteristic cardiac murmurs which are due to the atherosed condition of the valves The pain of angina may sometimes be localized in the wrists Dr Sawyer once mentioned to me a case in which the angina pectoris always manifested itself by a feeling of cord like constriction about each wrist There was, however, with this an attendant paleness of the countenance and anxiety and the patient was obliged to stop in his tracks until the pain had passed The pain in angina pectoris may extend through to the back, or up into the occiput, at other times into the right shoulder and down the right arm It may also radiate into the abdomen and down the inside of the thighs It is usually so severe that the patient has to stand still and wait until the pain passes by In the case mentioned the pain was relieved by gentle exercise, and that possibly may throw some light upon the question as to whether angina pectoris is always due to arterial spasm or not If due to arterial spasm in all cases

it would seem as if any effort of the muscular system would increase the arterial resistance through contraction of the muscles and thus make a greater demand upon the heat, in which case exercise ought to augment rather than relieve angina pectoris Particularly if as Leyden is inclined to think angina pectoris is really due to spasm of the coronary arteries as well as general arterial spasm, resulting in temporary anæmia of the heart muscle In cases where the paleness of countenance would seem to confirm this theory we find that remedies which produce arterial dilatation, such as the nitrite compounds, always give relief In this case there is an apparent contradiction, not only did exercise afford relief which would seem to indicate that contraction of the peripheral vessels had nothing to do with the production of the angina, but on the other hand since nitro glycerine gave relief, there must have been arterial spasm somewhere

The diagnosis of this case was not as difficult as is often the case, owing to the peculiarity of the cardiac sounds, although none of us I think really suspected the condition which we found of the coagulum in the left ventricle filling up the lower third of the cavity I gave my diagnosis of degeneration of the left ventricle, with atheroma of coronary arteries, because of the very peculiar character of the sound over the left ventricle which Dr Tilley has very aptly described It was a toneless, muffled sound as if the heart struck the chest wall through an intervening layer of cotton, while on passing the stethoscope from the left ventricle toward the right ventricle the first sound came out with its usual clearness and more or less of its booming quality, and it was on that that I based my diagnosis At the post mortem examination we found degeneration of both ventricles, more marked in the left than in the right This case would probably be classified by Leyden as subacute Leyden has treated this subject in the most scientific manner of any author, since generally the subject is treated in a desultory way under the various heads of chronic myocarditis, fatty degeneration, aneurism, rupture of the heart, etc

Leyden would group together all the different expressions of the same pathological condition, that is sclerosis of coronary arteries and all conditions dependent upon that, and he considers it under one subject of the changes of the heart resulting from the sclerosis of the coronary arteries He recognizes as acute cases those in which the patient is ill perhaps for a few moments or hours or days The first symptom is often a sharp attack of angina pectoris, or an attack of great cardiac distress and oppression without positive pain, which Gairdner speaks of as *angina sine dolore* In these cases the patient frequently first discloses that he has heart disease by falling dead in his tracks In cases of atheroma of a small branch of the left coronary artery, usually the anterior descending branch, frequently we find a condition closely resembling the hæmmorrhagic infarctus and the heart ruptures at that point, in acute cases death may be due to the rupture, although more often to failure of the heart Subacute cases, of which this seems to be an example, run their course in a few weeks or months and we find a combination of changes from acute fatty softening to chronic fibroid change, and these patients generally suffer a good deal with angina pectoris The chronic cases are those that last for years, sometimes fifteen or twenty, and the symptoms are those of cardiac weakness or progressive cardiac failure, and these patients may die suddenly or gradually In these cases we generally find extensive myo carditic changes with great thinning of the heart walls

The treatment of these cases is of course a thing which interests us It is very unsatisfactory, is merely palliative, and consists chiefly, in the severe cases, of rest, with cardiac tonics and stimulants Of especial service in angina pectoris are the nitrite compounds, although Leyden rather protests against the use of nitrite of amyl and nitro glycerine He recommends the hypodermic injection of morphine, stimulants, such as ammonia and camphor, hot alcoholic drinks, and heat to extremities The diagnosis has to be based, in most of these cases, upon the history and symptoms of progressive or sudden cardiac failure, and if we can find evidence of atheromatous change in the peripheral vessels the diagnosis is much easier In auscultating these cases I have frequently found what seemed to me to be a peculiarity of the first sound The sounds of the heart are nearly always described as free from murmurs, but since the booming quality of the first sound is undoubtedly due to the muscular element, and since the muscle of the heart is degenerated, the first sound takes on rather a short and valvular quality resembling very closely a second sound, so that frequently in these cases the two sounds appear to be two valvular sounds Although I am not yet prepared to say that one can base a diagnosis upon such a condition as that, yet I am satisfied that in cases where there has been marked atheroma of the radial arteries, with symptoms of heart failure, I have heard just this condition of shortness and valvular quality of the first sound over the left ventricle, particularly when over the right ventricle the sound is more prolonged

Dr Tilley said I have nothing more to add except that I have known of two or three cases in which, after a hypodermic injection of morphine, in a condition of atheromatous coronary arteries, the patient has passed off very rapidly, and I would be chary of using it, especially if I could obtain a satisfactory result from nitro glycerine The form of nitro glycerine that I used were the elegant tablets of Fraser, so much more convenient than the alcoholic solution

Dr W L Axford I have here the

SAC OF AN ANEURISM OF THE LEG,

not very large or elaborate, but interesting because of its locality and the history of the case Some time last fall, along in November, a Bohemian came to the South Side Dispensary, having a little lump about as large as a walnut just above the internal malleolus I could not get his history, as he could not talk English, all that I could make out was that it had been growing there about a year, and pained

him some The skin was natural over the growth, which felt soft and fluctuated I made up my mind that it was some kind of a cyst, and advised him to have it excised On cutting down upon the growth I found at once that I had made a mistake, from the color of the sac, which was blue One of my assistants said he saw a little artery spurt I stitched up the wound and found I had excised the sac of an aneurism It was about the size of a walnut when fresh This case was peculiar, as there were none of the usual symptoms of aneurism, it was also peculiar in the large size of the sac compared with the size of the artery The patient made an uninterrupted recovery

Dr Jones, of Pittsburg, Pa I heard only a portion of the discussion on the subject of angina pectoris One symptom I will mention as having occurred in my own experience, that I believe is not mentioned in any of the literature that I am familiar with In acute attacks of angina there is a feeling of constriction that may be relieved by firm pressure against a sharp body, such as the back of a chair or the edge of a table, that feeling of a patient wanting to press against some sharp substance, the back of a chair or the edge of a table, has been invariably present in all of the cases that I have seen, and I do not know that it is mentioned anywhere The use of nitro glycerine and amyl nitrite I would suppose would hardly be proper in chronic cases, on account of the danger spoken of, the danger of sudden cessation of the heart's action from paralysis or failure

Dr Lagree, *of Charleston*, S C, mentioned some

PECULIAR SYMPTOMS CAUSED BY EARTHQUAKES

The earthquake in Charleston, with us, is a thing of the past There were some peculiar features produced by the earthquake, from a medical point of view One of the most common conditions was an obstinate nausea, and in treating these cases we found the only remedy that would give any satisfactory result was muriate of cocaine Another condition we found was falling off of the hair in patches, especially among the ladies I have had three cases in which the hair gradually fell out in patches, which I attributed to nervous shock Fortunately the hair was generally saved Those were the most prominent symptoms produced by the earthquake

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MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, May 4, 1887

The President, Jos Taber Johnson, M D, in the Chair

Dr J Ford Thompson exhibited the specimen and gave the history of a case of

COCKLE BUR REMOVED BY TRACHEOTOMY FROM THE LARYNX

(See p 432)

Dr S C Busey said that Dr Thompson had confined himself to the removal of a cockle bur, but that Dr Weist had published an article in which he discussed the removal of all kinds of foreign bodies from the larynx, and had collected the published cases Some years ago he was called to see the 12-year old daughter of a physician Her father was not certain of the cause of the pain over the left bronchus, the cough, fever and loss of appetite, expectoration and emaciation which was present, although the girl stated that she had swallowed a "cockle bur" Dr Busey saw her when she had been sick about ten days He could not find any cause for the symptoms She complained for about six months, when she coughed up the bur The symptoms disappeared and she has not had any trouble since

Dr C E Hagner expressed his mortification that his attempts to remove the bur in the case reported had been unsuccessful He saw it above the false vocal cords, introduced the forceps and felt them strike it It was covered with mucus, and the forceps, instead of grasping it, slipped and pushed it out of sight He then gave up the search The following morning he again examined the patient, but the larynx was full of mucus and pus so that he could not see the bur at all He agreed with Dr Thompson that exploration with the finger is advisable He thought it better first to anæsthetize the patient and try the forceps If not successful with them then tracheotomy is called for The patient referred to by Dr Busey had frequent hæmorrhages in addition to the symptoms already mentioned He had a case some years ago of a man who had frequent violent paroxysms of coughing and great dyspnœa Very little air entered the left lung Some time afterwards, while the man was climbing a steep hill, he was seized with a violent fit of coughing and expelled a grain of oats, from the oatmeal he had eaten, which was covered with mucus and was as large as a marble

Dr E Carroll Morgan said that he was much interested in the history of Dr Thompson's case, and congratulated him upon its happy termination He was also pleased to learn that recourse was had to the laryngoscope, which is indeed to day an indispensable, as well as a ready, means for the recognition and extraction of foreign bodies in the air passages On the other hand, however, he regretted that in this particular patient the cockle bur was not extractable by laryngoscopal methods Since the introduction of the laryngoscope, operations for the removal of foreign bodies from the larynx by means of artificial openings have notably diminished One of the most striking instances in which the value of this instrument in diagnosis was demonstrated occurred in 1876, in the experience of Dr Samuel Johnston, then of London, but at present a practitioner in Baltimore, Md The history of his case is briefly as follows

A nervous boy of 14, living in Wisbeach, was suddenly seized during the night with suffocation and a feeling as if there was something sticking in his windpipe The family were aroused and a physician sent for The boy continued to suffer during the night from pain and difficulty of breathing In the morning, as there was no improvement in his symptoms,

the attending physician performed tracheotomy and put in a tube The breathing improved, but an attempt being made to dispense with the canula, dyspnœa immediately followed and the tube had to be replaced The boy was then sent to London, when, upon laryngoscopic examination, a small toy locomotive was found firmly wedged in his larynx, and was partly covered by a web which held it firmly in position It was found impossible to remove the foreign body through the natural passages, and the wound which had been made for the previous tracheotomy was therefore enlarged through the cricoid cartilage, crico-thyroid membrane and thyroid cartilage, when the locomotive came into view and was easily extracted The patient left the hospital with a good voice It is worthy of remark that in this case the toy locomotive was not suspected until detected by laryngoscopic examination, when the boy admitted having had such a toy in his mouth four months before

A case has recently been recorded by Dr D B Crawley, of Mississippi, in which a cockle-bur recognizable by digital exploration was extracted from the larynx of a negro aged 9, by the ingenious method of twisting cotton on the end of the index finger and rotating it in the larynx over the bur in such a manner as to fasten the prickles to the cotton Dr Thompson did not mention this case in his list, although he (Dr M) had just been told that the same expedient was unsuccessfully tried on the boy Dr Thorner succeeded in extracting an impacted cockle-bur from the larynx of a boy of 15 by means of a sponge instrument guided by a laryngoscope

During the past ten years he (Dr H) had extracted numerous foreign bodies from the larynx through the natural passages, the most curious of them being

A PIN WHICH HAD REMAINED IN THE LARYNX THREE WEEKS

The patient was a woman, aged 30, referred to him a year since, by Dr J W Bayne She stated that whilst holding a number of pins in her mouth three weeks before that one had been swallowed Since that time her sufferings had been very great, and there was almost complete inability to swallow food or to talk above a whisper The larynx on the right side, externally, was much swollen, and the patient in a nervous and debilitated condition Various unsuccessful attempts had been made in Maryland, from whence the patient came, to extract the pin, when, upon her arrival in Washington, she was immediately sent to him by Dr Bayne Repeated laryngoscopic examinations under cocaine anæsthesia revealed the presence of a pin which transfixed the right ary epiglottic fold, the point of the pin looking inwards and downwards towards the left vocal band, its head being in the upper portion of the fossa pyriformis, from whence, after many trials, it was ultimately withdrawn by means of Mackenzie's antero posterior forceps The pin was greatly rusted, and is herewith presented to you for inspection This patient made a rapid recovery, although there was laceration and swelling of the lower pharynx and interior of the larynx

Regarding digital exploration of the larynx and its easy performance, to which Dr Thompson has called attention, he would say that it is of great value and readily accomplished, especially in children The finger is a valuable aid in practicing O'Dwyer's method of intubating the larynx, and enables us to prevent the tube from slipping out of the larynx whilst we are withdrawing the safety string Dr Morgan had intubated one child 22 months old for laryngeal diphtheria early in December last, a brief allusion to which was published in the *Maryland Medical Journal*, December 25, 1886 This child died about 18 hours after intubation, and this is perhaps the reason the Society has not heard more of this his first, and unsuccessful, case of laryngeal tubage

DR J FORD THOMPSON had intentionally excluded the removal of everything but cockle bur There are numerous cases of foreign bodies having been removed from the larynx Ashurst goes over the whole subject in his last work In this case he had passed a large catheter and a large pair of forceps upwards through the tracheal wound, but the finger proved more effective This use of the finger is the most interesting feature, and he has not been able to find a similar case reported

(*To be concluded*)

CHICAGO GYNÆCOLOGICAL SOCIETY

Regular Meeting, Friday, April 15, 1887

THE PRESIDENT, CHAS WARRINGTON EARLE, M D, IN THE CHAIR

DR H T BYFORD presented the

ROUND LIGAMENTS FROM A CASE OF ALEXANDER'S OPERATION

I have here a specimen of the round ligament, removed by the Alexander operation only a few hours ago They are interesting on account of the extreme attenuation, which may account for some cases of failure in this operation They are almost as thin as wrapping cords, and will give quite an idea of what some of these ligaments are after they are stripped of their fibrous coat and drawn out In one operation which I performed there was just such a condition, and after a long careful attempt to make them run, I broke one of them and almost lost it The other one I could not get entirely loose, and only shortened it three quarters of an inch I met with one ligament twice the normal diameter, or over four times the diameter of this one, the opposite ligament in that case was about as thin as this one I have performed Alexander's operation six times

DR C W EARLE exhibited a

CYSTIC SARCOMA OF RIGHT OVARY

DR CHRISTIAN FENGER exhibited a

PROLIFERATING CYSTOMA WITH PARTIAL INTRALIGAMENTOUS DEVELOPMENT

In addition to my remarks on parovarian cysts, at a former meeting of this society, I wish to present a

specimen of a proliferating cystoma with partial intraligamentous or retroperitoneal development It was taken from a woman, 48 years old, operated upon March 22, 1887, in the Emergency Hospital The tumor was of enormous size The abdomen measured at the umbilicus 132 cm in circumference, and from the xiphoid process to the symphysis pubis 63 cm When, after tapping, the cyst was partially brought out of the wound, I found a very peculiar formation attached to the side of the cyst near the abdominal end of the enlarged Fallopian tube As will be seen in the specimen passed around, it consists of a long, narrow cylindrical sac, 21 cm long and 4 cm in diameter Its wall is almost transparent and half filled with a clear fluid I have not been able to find described anywhere in the literature a similar appendix to any ovarian cyst It seems to me likely to be a reopened and dilated Morgagnian hydatid, the remnant of the terminal portion of Muller's duct The retroperitoneal portion of the cystoma was enucleated as usual, leaving the large wound cavity with insufficient peritoneal covering In this cavity Miculicz's drain was used with a glass tube through its center The last of the drain was removed on the eighteenth day, and the wound finally closed shortly afterward

DR W H BYFORD I suppose there are very few instances of parovarian tumors in which they become pedunculated We do infrequently meet with instances where there is a fair pedicle, but they are exceptions to the rule, which is that they rise from within the broad ligament, and often carry up with them a layer of fibrous tissue And instead of being pedunculated, they commonly lie in a cup-shaped excavation in the broad ligament, extending down into the ligament some distance There is therefore generally no way of getting rid of them except by enucleation As was stated by Dr Fenger at our last meeting, the general subject of enucleation was probably taught to Americans at least, by Dr Miner, of Buffalo But at the time Dr Miner wrote upon the subject we did not possess the same knowledge of the difference between broad ligament tumors and ovarian tumors that we now have At that time we frequently confounded ovarian tumors with tumors of the broad ligament, and Dr Miner did not confine himself to the consideration of this sort of tumor, but believed he was always enucleating a cystoma of the ovary when he removed a cyst from the abdominal cavity We are now disposed to believe that most, if not all his cases (he did not enucleate many) belonged to the variety of parovarian cysts It is with the view of pointing out a few things in connection with the enucleation that I am now speaking In practicing enucleation, as we have done heretofore, we make every effort, without much method, to get rid of the fibrous covering by tearing it off, without any special reference to the exact manner in which it is done

I have met with a few of these tumors in the last three or four years, which has caused me to think differently on this subject, and made me to look more narrowly into the matter of enucleating them About four years ago I was called upon to operate in a case of this kind, in which there was considerable inflammation as well as a very thick coat of fibrous substance brought up with the upper layer of the broad ligament, enveloping the lower third of the tumor quite closely In operating I found that by careful manipulation I could get out the cyst proper from the capsule without tearing down the side of it The manipulation consisted in pushing the fingers down deep between the capsule and the cyst until they went below the tumor on all sides and in the centre, when I found that I could get the sac entirely out, and in that instance succeeded in removing it without at all tearing down the sides of the enveloping capsule I could then bring the edges of this cup shaped stump to the external wound and stitch them to it By means of a drainage tube in this cavity passing through the external wound, I was able to drain of the fluid, while the whole raw surface of the hollow stump was excluded from the peritoneal cavity I have done that operation myself now three times, and have seen it performed twice Two weeks ago last Sunday I saw an operation at the Woman's Hospital, performed by Dr Henry T Byford, for removal of one of these broad ligament tumors After emptying the sac with the trocar, so that it was relaxed, he lifted it up as high as he could with Nélaton's forceps, then took the knife and lightly cut through the fibrous covering until he could get his fingers through it, when it was enucleated as above described The inside of the cup-shaped pedicle or stump was entirely excluded from the peritoneal cavity, its edges were brought up to and included in the external wound, and then a drainage tube introduced This method of operating is always satisfactory, as, by making a perfectly close cup, the sides do not permit of the blood or serum getting into the peritoneal cavity In two cases we found that no discharge came through the tube, hence it is probably not always necessary to drain A remarkable thing in connection with the operations is that there is very little bleeding In Dr H T Byford's case the patient is convalescent, almost ready to go home, she lost less than 4 ounces of blood in the whole operation There was no ligature placed upon any of the vessels

DR FENGER spoke of the operation being somewhat dangerous on account of the intestines In this case the cæcum and the vermiform process were plainly visible upon the side of the tumor, but the fingers hulled out the capsule upon which they lay and left them perfectly free I am convinced that these tumors can be cured as a general rule much more easily than by enucleation I have not tried the process upon large tumors, but in small ones I make an incision through the abdominal walls, evacuate the tumor and leave a drainage tube in the sac In four instances I have seen them cured in this way These cysts are so simple in structure and have so little vitality that it is only necessary to drain them Even tapping or aspirating them is sometimes sufficient No dangers have arisen during the convalescence, and I am in hopes that the treatment of parovarian tumors on further experience will be very much simplified I fully be-

lieve that evacuation and drainage of large parovarian cysts would be quite as successful as in the smaller ones

A NEW COLPOPLASTIC OPERATION FOR DEFECT OF THE VAGINA

When I saw the patient the external genitals were normal, and immediately inside of the labia minora there was a cicatricial mass, funnel shaped, and in the centre of it an opening through which only a very fine probe would pass Examination of the rectum showed, about 3 inches inside of the external genitals, a tumor which I believed was the uterus, but when I came to operate I found it to be a sac filled with blood and mucus—a sac the size of a hen's-egg, and behind that a small uterus This dilated sac was at the upper portion of the vagina, and the lower 2½ to 3 inches of the vagina was a cicatricial mass I made the usual operation recommended under these circumstances, dilatation with partial excision of the cicatricial tissue, dilatation with blunt instruments between the rectum and bladder In that way we can get a vagina of any size without much trouble, a space large enough for a child to pass through, but we know that it is very difficult to keep such an artificial vagina from retracting In this case, as soon as the glass plug was left out for a few days, the vagina retracted so as to barely permit the passage of the finger It is natural that here, as in other places of the body, we should want a covering of skin and mucous membrane to keep such a channel open

Heppner, of St Petersburgh, in 1872, proposed to operate for absence of the vagina, at the same time dislodging the menstrual blood accumulated, then planting in a flap from the peritoneum The posterior lines of the H were prolonged so as to loosen the flap sufficiently to put it some distance into the artificial vagina Credé, in 1883, had evidently not seen this article Nobody seems to have imitated or adopted this method, because Credé describes a method of operating in an obstinate case that had been operated upon over and over again with usual dilatation method, and in which the vagina always retracted so as to cause the patient great inconvenience in her menstruation He operated by dilating the vagina as usual, then he took a flap consisting of one labium majus, leaving the labia minora, and planted that in the posterior surface of this new vagina He states that the hairs on this labium majus did not cause any inconvenience It was an elderly lady, over 50 years of age, where marriage was out of the question, she only wanted relief from her menstrual troubles In this case I thought it would be better to use the labium minora for a flap on each side, the labium minus, when reasonably well developed, being capable of folding and unfolding, and consequently the flap acquires the diameter of such labia minora By unfolding them we get one inch more By loosening the labia minora on the sides, leaving them in connection with the skin at the posterior side of the entrance to the vagina, and then unfolding them, I get a flap 3 inches long and an inch in diameter, although this labium minus looked very thin, almost transparent, so that I thought it would die off when planted in It did not have the advantage of being mucous membrane, but was without hairs The result was that both of the flaps healed I have the patient here, so that the Fellows of the Society can see that the vagina is almost perfect The loss of substance caused by taking the flap is very easily covered by drawing together all the skin It is very movable, so that there is really no loss of substance A flap of skin 1½ inch broad is very easily covered by drawing the neighboring skin together So far as after-treatment is concerned, there has been no difficulty In the beginning the vagina was packed with iodoform gauze, and later glass plugs were introduced

ANTISEPSIS IN ABDOMINAL OPERATIONS, SYNOPSIS OF A SERIES OF BACTERIOLOGICAL STUDIES

(Preliminary Note, by Christian Fenger and Bayard Holmes)

Synopsis of a Series of Bacteriological Studies—These investigations were undertaken to determine how far the necessary aseptic conditions had been secured and maintained in the abdominal sections performed by Dr Christian Fenger One case of another operator is brought in to compare less thorough antiseptic precautions

In order to estimate the results of these researches, you must know what preparations were made for the operation on the part of each concerned

The Preparation of the Operating-Room—In the Emergency Hospital and in the County Hospital, the walls and the floor and all the furniture were thoroughly washed with a 1–1,000 sublimate solution on the day before the operation The cracks about the windows and doors were stuffed with cotton, and the room closed to every one except the nurse that made the preparations

To test the condition of the atmosphere in this room, in the Emergency Hospital, four plates of gelatin were exposed for 48 hours on the operating table, August 24 and 25, 1886 After six days' incubation in the moist chamber, from eight to twelve colonies of all kinds appeared on each square inch of surface Most of these were moulds, which grew very rapidly, some were micrococci and some bacilli As less than twelve colonies developed to the square inch, it is probable if the plates were exposed only an hour instead of 48 hours, not more than one colony would be found on each four square inches So that the danger of atmospheric infection from falling germs would be very slight under similar conditions The danger would be, no doubt, increased by the movements of the assistants, and the increased circulation of air through the difference in temperature of the external and internal atmosphere when the room was in use

The Preparations of the Operator and Assistants—Each took a sublimate bath (1-2000) and put on sterilized cotton suits The hands and arms were then washed 5 minutes with warm water and green soap, and scrubbed with a brush, and then washed half a minute in a 1-1000 sublimate solution The patient received substantially the same treatment

(To be continued)

FOREIGN CORRESPONDENCE

LETTER FROM LONDON

(FROM OUR OWN CORRESPONDENT)

Treatment of Inveterate Neuralgia—Apothecaries and Medicine—Phenol Mercury

Mr Victor Horsley has recently drawn attention to some cases of *Inveterate Neuralgia* which have been under treatment by him He gave a short history of three cases of this distressing malady which he had treated with apparent success by avulsion of the fifth nerve All three of his cases had come under his observation at a very late stage of the affection, the shortest period being three years and a half after the outset of the mischief, and in one case as much as seven years after All were practically edentulous when they came to him, and from all of them after the operation he had the same story, namely, gratification at being relieved from pain, and regret at the loss of so many sound and useful teeth Were there no indications by which it was possible to diagnose pain which was due to mischief somewhere along the trunk of the nerve from that which was due to disease of the teeth? If this could only be done with certainty it would mark an important advance in dealing with these often terrible cases of long suffering Pain referred to one of the branches of the fifth nerve might be due to mischief of cerebral origin, to irritation along the trunk of the nerve, or at its peripheral extremity He did not dwell on the possibility of the pain being due to intra cranial mischief, since the general rules applicable to this class of cases would generally suffice for the discovery of the seat of trouble The diagnosis between some affections of the trunk of the nerve and of its peripheral termination was not so easy, but judging from his own experience, he thought there were two points which might assist in forming a decision A very valuable indication of mischief in the trunk of the nerve, were trophic changes when present Thus in one of his cases, the lower lip was greatly swollen, the skin being glazed and excessively sensitive, or the vessels might be at one time dilated and at another just the opposite Wasting of the muscles was another evidence of the same kind Certain abnormal conditions of sensation were also valuable In an ordinary case of toothache all the branches of the fifth nerve might seem to be affected but in cases where the disease was in the trunk of the nerve, the skin might be hyperæsthetic at one place and anæsthetic at another

Another characteristic form of hyperæsthesia was that in which gently touching the skin caused extreme pain, whilst firm pressure caused no pain at all As to the apparent origin of the pain, he found that in most cases the patient said it began in the teeth, but in some cases it was said to begin in the bone and in the skin If the pain was referred primarily to the teeth, it might be due to them, or it might not, but if it began in the bone or skin and only affected the teeth subsequently, he thought it might be inferred that the disease was in the trunk of the nerve If, again, in addition to severe pain over the area of distribution of the nerve, distinctly tender spots were met with along the course of its branches, this was generally an indication that the whole nerve was in a state of irritation, but a somewhat similar condition sometimes might be met with as a result of peripheral irritation If the pain was brought on more commonly by movement, this seemed to indicate affection of the nerve trunk All his cases stated that opening the jaw to eat or talk brought on pain, and so far as he was aware, the effect of movement in causing pain was not so marked in cases where this loss was due to peripheral irritation With regard to treatment, any cases of dental irritation should be removed, and in some this would effect a cure Drugs invariably failed sooner or later Nerve stretching should not be performed on the fifth, for although it gave relief for a time, the pain invariably recurred Avulsion, performed close to the aperture of exit from the skull as possible, generally cured, the success of the operation seeming to depend greatly on success in obtaining primary union, and the removal of the nerve was not followed by any trophic changes in the parts supplied by it

At a recent meeting of the General Medical Council, in which the right and wishes of the Apothecaries' Society was under discussion, Sir William Gull contended that it was not desirable to have a Society of Apothecaries at all, and that its existence was contrary to the interests of medicine People he said did not get well by drugs When the Prince of Wales was ill of typhoid fever, how many doses of medicine did he take? Not four The question was, whether the profession should be set free from the trammels of the past Medicine was once given even for fractures It was the powers of nature that effected the cure of disease, and the duty of the medical men was not to give drugs, but to see that nature's powers were not interfered with

Since the time of Paracelsus, when the antiseptic properties of mercury first came to light, mercurial preparations have been more or less in vogue throughout the world A new compound of this description, which may possibly attract a good deal of attention, is called phenol-mercury It is produced by mixing an aqueous solution of 132 parts of phenol potassium with a solution of 271 parts of mercuric chloride, when a reddish orange precipitate is thrown down This is washed on a filter until the filtrate no longer gives a reddish color on the addition of iodide of potassium In drying the product its color becomes brighter and the dry powder retains only a slight odor of carbolic acid Phenol-mercury is given in pills containing 0 02 grams, of which the dose is 2 a day at first, gradually increased six daily

G O M

DOMESTIC CORRESPONDENCE

HEART WOUNDS

Dear Sir —Believing with Dr Arthur Young, who writes for THE JOURNAL of Sept 13 concerning the "Burton Case," that cumulative testimony is of more importance than speculation as to the capacity for

action after heart wounds, I beg leave to submit the following facts in an accidental killing The fifteen years old son of H Bruaw, of this place, was found dead near the railroad track on the afternoon of Aug 9, 1886 It was at first supposed he had been killed by the cars, but on removal to the house and stripping, a hole of considerable size was found about midway between the left nipple and sternum It was then supposed he had been shot, and a vicious neighbor boy who had threatened the family was arrested On arrival of the coroner, and with the assistance of Dr Wm Thompson, I made an examination We found the missile (the character of which was unknown) had fractured two ribs in passing in, and on enlarging the opening and introducing my hand, I found a corresponding opening in the pericardium which was full of blood, and a stellate laceration in the front wall of the left ventricle, through which I extracted from the cavity of the ventricle a crumpled piece of tin ¾×½ inch in size This cleared up the mystery Subsequent investigation showed that the boy had found an open package of signal torpedoes, used to stop trains at night and at other times, left there by track repairers, and near by some bolts and an old rail which they had removed Stooping down he had laid a torpedo on the rail and striking it with the bolt head, it had exploded, driving the piece of tin into his heart He must have then risen to his feet and run or walked in the direction of his home at least thirty steps, crossing to the opposite side of the track before he fell on his face, dead Dr Young's case was a knife incision, which would not have emptied the ventricle as promptly as this torn opening Might it not be possible, then, that a would be suicide could shoot himself through the heart, then, uncertain of the result, make the second attempt? or in other words, ignoring the direction of the shot in the "Burton Case," would not other evidence than that the first shot was through the heart be needed to determine between homicide and suicide?

HERBERT C JONES, M D

Cerro Gordo, Ill, Sept 21, 1887

LETTER FROM NEW YORK

(FROM OUR OWN CORRESPONDENT)

Summer Charitable Work for Poor Children—Meeting of the American Gynæcological Society—College of Physicians and Surgeons in the New Buildings and Preliminary Requirements—Death of Dr Alonzo Clark

The various charitable societies have now brought their summer work among the children of the poor to a close During the season just ended the St John's Guild have received some $12,000 for the support of the free excursions of its floating hospital, and as the total expense of a single excursion, including food for the mothers and children, does not exceed $250, it will be seen that the Guild has been enabled to accomplish much good during the heated term Dr Moreau Morris, Chief Sanitary Inspector, who has had the direction of the summer corps of physicians of the Board of Health this year, has written a letter to Mr Faure, Secretary of the Guild, in which he extols the results obtained in the restoration to health and saving of life among sick children by the trips upon the floating hospital One has but to visit the barge, he says, to become convinced of the value of these excursions, and the gathering of nearly a thousand enfeebled children strikingly reveals the sufferings of the little ones caused by the close and unwholesome atmosphere of the tenement houses where they live and their improper and insufficient food There is no danger of contagion on the trips, as every child is subjected to a rigid scrutiny by the examining physicians before it is allowed upon the boat The absence of all sectarianism, as regards creed or race, in the dispensation of this charity, Dr Morris continues, commends it to all classes, and in the caring for these afflicted children by the summer corps, supplemented by these fresh air excursions and liberal and judicious feeding, no nobler application of Christian charity could be desired As an illustration of the great good resulting from the excursions he refers to an instance which came under his observation on the occasion of an official visit to the floating hospital in the early part of August, in which an infant was carried on board almost moribund, to return from the invigorating trip down the Bay with a new lease of life During the past season the St John's Guild has added to its charitable work a useful feature in giving some special free excursions for "debilitated, feeble, and worn out convalescent adults"

The Summer Home at Bath and the Health Home on Coney Island of the Children's Aid Society were closed for the season on the 10th of September At the former 4,436 poor children from the tenement districts of the city were received, and of these over 3,000 little girls spent a week, while at the latter 4,602 mothers and sick infants had the benefit of the day excursions, and 753 mothers, with 1,448 children, remained for a week The total number at both homes was 11,239

The twelfth annual meeting of the American Gynæcological Society, which was held at the hall of the New York Academy of Medicine September 13, 14 and 15, was marked by the attendance of a number of distinguished foreigners who had come from the International Medical Congress at Washington, and among these were Drs Grailey Hewitt and George Granville Bantock, of London, A R Simpson, of Edinburgh, August Martin, of Berlin, A Cowles, of Genoa, and G Apostoli and A Doléris, of Paris. On the evening preceding the meeting Dr Paul F Mundé entertained these gentlemen, with a number of American guests, at an elaborate dinner at the Union League Club, and after the adjournment on the third day the Society had its annual dinner at Delmonico's, while on Tuesday evening, September 13, Dr Fordyce Barker gave a handsome reception at his residence to the American Gynæcological Society, its distinguished foreign guests, the Obstetrical Society of New York, and the members of the Obstetric Section of the New York Academy of Medicine

On the 2d of October the College of Physicians

and Surgeons will commence its first session in the magnificent new buildings provided by the liberality of the late Mr Wm H Vanderbilt and his family, and the announcement is made that while no preliminary examinations will be required for the session of 1887–8, for the session of 1888–9, and thereafter, applicants for matriculation will for the first time at this College be required to undergo examinations for the admission, with the exception of those, 1, who shall declare themselves not to be candidates for the degree of M D from the College, 2, who shall present certificates of having been successful at examinations for admission to the School of Arts or School of Mines of Columbia College, of which the College of Physicians and Surgeons is the medical department, 3, who shall present diplomas or certificates of graduation in arts, philosophy, science, or medicine, from recognized colleges and schools of science, 4, who shall present certificates from recognized colleges or schools of science, to the effect that they have studied satisfactorily any or all of the subjects required for admission to the College, in which case they will be admitted without examination in the subjects so certified to The examinations for admission are to be in writing, and will include English composition, sufficient Latin for the translation and parsing of Cæsar or Sallust, algebra, as far as simple equations, and the first book of Wentworth's Geometry, or its equivalent The examinations are to be held semi-annually, and an applicant rejected or conditioned in any branch or branches will be eligible for reexamination at any subsequent semi-annual examination

In the death of Dr Alonzo Clark New York medicine loses one of its most illustrious exponents, although the State of the venerable professor's health has for some time past necessitated his complete retirement from professional work Dr Clark felt a deep interest in the "Code question" which agitated the profession here a few years ago, and was in hearty sympathy with the movement which resulted in the organization of the now powerful and prosperous State Association, but his enfeebled condition prevented him from taking any active part in the struggle

P B P

NECROLOGY

WILLIAM H THORNDIKE, M D

William H Thorndike, M D, born at Salem, Mass, died at Boston, Dec 26, 1884, aged 60 His death has left a large void in the medical profession of Boston, exemplified so well for thirty five years the life of a good physician that it is difficult to do his character justice in an obituary notice Modest in bearing, Saxon in speech, reticent of many words, his calm judgment, clear perception, and entire honesty commended him to the confidence alike of friends and patients He was the type of unselfish devotion to his calling He pursued medicine as a profession, and not as a trade Too careless, perhaps, of pecuniary returns, he lived in his cases, gave himself wholly to his sick, and was death struck while attending a professional call He was an active and valued member of the various medical organizations, including that of the American Medical Association since 1865

Beginning to practice in a somewhat isolated community at East Boston, he early learned to rely wholly on himself, and never hesitated to undertake anything he was called on to do Thus was developed a peculiar roundness and completeness of character usually found only in a country doctor To this he added the wide experience and versatility generated in great cities, and both were concentrated and widened by seventeen years' service as surgeon of a great hospital All departments of medicine and surgery, many of which are now confined to specialists, he practiced without hesitation and with success

He belonged to the older school of surgeons Natural taste, acquired dexterity, and long practice, had made a deft, intrepid and successful operator He loved his art With him to see clear was to do Diagnosis was followed by action Expectation in surgery he well recognized as of less value than in medicine For twenty years, both in private practice and in the hospital, he did an enormous number of operations, surgical gynecological, obstetrical, ophthalmic An enumeration would be tedious, and we will allude only to the unusual ones He tied the internal iliac artery, behind the peritoneum, for secondary hæmorrhage from a perforating wound, and the patient lived to attend the funeral of his surgeon He tied the external iliac vein for primary hæmorrhage from a stab with success He tied the gluteal artery at its emergence from the sciatic notch for a traumatic aneurism in the nates. In this he boldly performed the operation described by Bell, who so graphically describes the rush of blood and clots and the difficulty of seizing the vessel He removed a cobble-stone, 5 inches by 3, and weighing 2 pounds, from the peritoneal cavity with success In this remarkable case the patient had inserted the stone into his rectum, thence it had ulcerated through the rectum and colon into to the peritoneum Dr Thorndike passed his hand into the rectum, but the stone escaped beyond his reach He then opened the peritoneal cavity by an incision 5 inches long, parallel to the rectus muscle, and removed the stone The patient recovered He opened the gall-bladder, and removed calculi by incision

Among the surgical feats he prized the most were two operations for evacuating pus from a retro peritoneal abscess near the cæcum The symptoms in the first case were constitutional more than local, but very intense He made the incision to tie the iliac artery, pushed back the peritoneum, found a mass of induration in the iliac fossa, plunged in a trocar, and was rewarded by evacuating pus, and the perfect recovery of his patient Most of these operations were done before the days of antiseptic surgery The removal of Meckel's ganglion for neuralgia, amputation at the hip joint, many lithotomies, Cock's operation for perineal section—which he valued highly—many large tumors, might be added to this list He also

had practiced every operation of modern gynecology except Battey's operation

A large, continuous, and exacting private practice gradually wore him out, but his constitution was also sapped by a poisoned wound received three years before his death He sank rapidly under a double pneumonia, and died in forty-three hours from the primary chill, apparently unconscious of suffering

D W C

HENRY M SAVILLE, M D

Henry M Saville, M D, was born in Quincy, Mass, July 29, 1833 Graduated from Amherst College in 1855 He commenced the study of medicine at Dartmouth College, taking his second course at Harvard Medical College, and graduating from the University of Pennsylvania in 1857, joining the Massachusetts Medical Society in 1858, and the American Medical Association the same year He at once commenced practicing medicine in his native town, and was eminently successful In April, 1861, he was made surgeon of Fourth Mass Infantry, accompanying it to Fortress Monroe, was at the battle of Big Bethel and returned home after a three months' volunteer service He married in 1862, and moved from Quincy to Boston, where he practiced for ten years His health failing in 1872, he was obliged to seek a warmer climate, spending one winter in Egypt, visiting California, passing several winters in Florida, with so much benefit that he again tried a Northern winter, located in New York, where he died Jan 11, 1881, of pneumonia

M G P

LUTHER PARKS, M D

Luther Parks, A M, M D, whose death was previously announced, was born in Boston, Nov 4, 1823, and graduated at Harvard College in 1843, taking high rank in a class which included many men who have become distinguished Dr Parks took his degree of M D in 1847, and in the same year went to Ireland as surgeon of the U S Sloop of War "Jamestown," which was sent, loaded with provisions, to relieve the starving Irish people He was there made a Fellow of the Royal College of Surgeons of Ireland After his return he married Miss Julia Dale, and established himself at the South end of Boston In his active practice there of eleven years, during a portion of which he served as one of the District physicians of the Boston Dispensary, he was notable for conscientious fidelity and kindness toward his patients, and for his skill as an obstetrician, which he took pains to perfect, by practical work at the Rotunda Lying in Hospital at Dublin, during a second visit to Europe in 1852 After the death of Mrs Parks, in 1859, he again went abroad, everywhere interesting himself in what was being done in the profession

Dr Parks married in 1861 Miss Catharine Burroughs, and, at the request of his father who was advancing in years, he removed to Chestnut street and retired from active practice During the late war, at the solicitation of Governor Andrew, who was a personal friend, he went to the peninsular of Yorktown as a volunteer surgeon After his father's death, Dr Parks again went, in 1872, to Europe, residing there until his death at Pau, Nov 19, 1886, aged 62

Dr Parks was for some years one of the physicians of the Boston Lying-in Hospital, and was associated with Dr S L Abbot, as editor of the *Medical and Surgical Journal* At the annual dinner of the Massachusetts Medical Society in 1871 he presided as Anniversary Chairman As Chairman of a Committee of that Society he carefully investigated and reported upon an epidemic of cerebro-spinal meningitis in Massachusetts He joined the American Medical Association in 1849 attending in 1855 and 1865

M G P

MISCELLANEOUS.

NEW BOOKS RECEIVED

Transactions of Michigan State Medical Society, Twenty Second Annual Meeting, held at Lansing, May 12 and 13, 1887

Transactions of the Thirty Seventh Annual Meeting of the Illinois State Medical Society, held in Chicago, May 17, 18 and 19, 1887

Transactions of the Medical Association of the State of Missouri at the Thirtieth Annual Session, at Macon City, Mo, May 10, 1887

Transactions Texas State Medical Association, Nineteenth Annual Session, held at Austin, April, 1887

Massage By Geo H Taylor, M D Published by J B Alden, New York

Student's Guide to Diseases of the Eye By Edward Nettleship, F R C S Third American and Fourth English Edition Published by Lea Brothers & Co, Philadelphia

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM SEPTEMBER 17, 1887, TO SEPTEMBER 23, 1887

First Lieut Julian M Cabell, Asst Surgeon, relieved from duty in connection with the annual Dept Rifle Competition at Bellevue Rifle Range, Neb, ordered for duty as medical officer at the "Rifle Camp for Team of Distinguished Marksmen," Bellevue Rifle Range S O 89, Dept Platte, September 10, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING SEPTEMBER 24 1887

Surgeon H P Harvey, ordered to the U S S "Mohican"

Surgeon G A Cooke, detached from the "Mohican" and ordered home

Medical Inspector C J Cleborne, promoted to Medical Director September 18, 1887

Surgeon T C Walton, promoted to Medical Inspector September 18, 1887

P A Surgeon J C Boyd, promoted to Surgeon September 18, 1887

Surgeon J R Tryon, ordered to Marine Rendezvous, N Y October 1, 1887

Asst Surgeon J G Field, detached from Marine Rendezvous, N Y, and ordered to the "Vermont"

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE WEEK ENDING SEPTEMBER 24, 1887

P A Surgeon J H White, promoted and appointed P A Surgeon from October 1, 1887 September 19, 1887

Asst Surgeon W J Pettus, to proceed to Savannah, Ga., for temporary duty September 20, 1887

Asst Surgeon H T Goodwin, appointed an Asst Surgeon September 22, 1887 Assigned to temporary duty at Norfolk, Va, September 23, 1887

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ORIGINAL ARTICLES.

THE PROSTATE GLAND

A Review of its Anatomy, Pathology, and Treatment

Read in the Section on Surgery and Anatomy, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY A H WILSON, M D, M R C S (ENG), OF BOSTON, MASS

The importance to the genito-urinary surgeon of a due appreciation of the pathological changes underlying a sound system of therapeutics, of that portion of the urinary canal called the posterior or prostatic urethra, and surrounded by that composite body called the prostate gland, must be my apology for entering into a consideration of its minute anatomy with considerable detail

Anatomy.—The prostate gland, or more properly speaking the prostate muscle, is a composite organ composed of unstriped muscular, fibrous, elastic, connective, glandular, nerve, vascular, lymphatic, and a small amount of striped muscular tissue It resembles a truncated cone in shape, its base surrounding the neck of the bladder, its apex terminating at the membranous urethra, from which it is separated by the posterior or deep layer of the triangular fascia or triangular ligament Its position in the erect posture of the body is obliquely downwards and forwards It is placed just below and behind the lower border of the symphysis pubis, and distant from the same from three- to five eighths of an inch, the intervening space being occupied by fascial cellular and muscular tissues It rests upon the second portion and the junction of the second and third portions of the rectum From a series of fifty-three healthy adult prostates examined by Sir Henry Thompson, he makes the measurements as follows From base to apex, from 1 3 to 1 8 inches, measurement most commonly found, 1 4 inches, the greatest transverse measurement near base, from 1 4 to 2 inches, measurement most commonly met with was 1 75 inches, the point of extreme thickness ranged between 55 and 95 inches, measurement most commonly met with was about 7 of an inch The measurements given by Dupuytren are considerably larger, who believed the prostate to measure from 20 to 24 lines transversely, and to be 10 or 12 lines in thickness, and upon these estimates his calculations for the operation of bi lateral lithotomy were based Deschamps, Senn, Gross, and Hodgdon, all of whom made practical researches relative to the size of the prostate, practically agree with Thompson, whose conclusions, I think, we may safely accept as the average size of the normal prostate The weight of the adult normal prostate may be placed at from 4 to 6 drachms This accords with the conclusions of Thompson, also those of Dr Messer, of the Royal Naval Hospital, who dissected 100 prostates, 45 are classed as normal in size and average in weight, 4 drachms and 57 grains

The prostate consists of two lateral, symmetrical lobes, each of which is somewhat pointed anteriorly and terminate posteriorly in rounded extremities which, projecting somewhat, present an angular interval or notch between them These two lobes are united by two intermediate masses, one of which is placed in front of the urethra, and consists of muscular and connective tissue, and is called the anterior commissure or isthmus The other is placed behind the urethra, and lying between the posterior borders of the lateral lobes their whole length consists of a stratum of unstriped muscular, glandular, and connective tissue, thin and narrow in front, but posteriorly this stratum becomes thicker and sometimes has a rounded form, as if it were an independent formation The anterior or thin portion of this structure has received the names of the posterior isthmus or commissure, while the posterior rounded extremity or base has received the appellation of the third or middle lobe of the prostate, the propriety of which appellation Sir Henry Thompson calls in question Sir Everard Home appears to have first conceived the idea that the portion of the posterior connecting band of prostatic tissue which forms a rounded and thickened border should be classed as an independent lobe, and this idea has been accepted by most English anatomists The position of Thompson, that in the normal prostate there is no portion of the central connecting mass of prostatic tissue, which presents sufficiently the appearance of an independent formation to entitle it to the appellation of the third or median lobe, is also taken by Cruveilhier, and by most of the French anatomists Cruveilhier expresses the general opinion of French observers when he says that the ejaculatory ducts being received into a groove or channel in the substance of the prostate, a portion of variable size is indicated by them, but that it has no title to be called a lobe It is not, he says, an iso

lated piece, and should be called the median portion If we retain the term lateral lobes, we apply to the part anterior to the urethra the term anterior commissure, a part which is about one inch in length, and the term posterior commissure to that which corresponds to it for the same length behind the urethra, it leaves that thicker portion of the organ which lies behind the veru montanum, which is penetrated by the ejaculatory ducts, which is largely occupied by glandular structures and which is prone to great increase of size in age, to be designated by the term "median portion"

The prostatic urethra commencing at the neck of the bladder, continues through the prostate in the erect posture downwards and slightly forwards, the great masses of the organ lie on either side of the canal There has been considerable difference of opinion as to which of the two commissures uniting these lateral masses was the larger or thicker of the two Most observers believe that in the normal condition the larger portion is found behind the urethra Mercier, on the other hand, asserted that the anterior stratum is larger and thicker than the posterior Thompson found, on examination of ten healthy adult prostates, the anterior and posterior commissures to be of about equal thickness in 7, posterior commissure thickest in 2, and the anterior in 1 The vesical boundary of the prostatic urethra is the uvula vesicæ, seen as a slightly rounded prominence of the floor of the neck of the bladder From this point forward the canal gradually expands a little and presents a general indication of hollowing or depression of the floor, varied by a central longitudinal elevation, the veru montanum This eminence commences in a faint whitish line directly in front of the uvula, and gradually rising for 6 or 8 lines, reaches its highest point (about ⅛ inch) in the central line of the urethra It widens and becomes rounded at the highest point, and then somewhat suddenly diminishing in size as it advances forward, exhibits on the anterior slope a small opening, then gradually lessening leaves the prostatic and enters the membranous urethra The depression of the prostatic urethra (*sinus prostaticus*) is then divided into two lateral furrows, one on each side of the veru montanum In these furrows may be observed numerous little orifices twenty to thirty in number, the mouths of the prostatic ducts They are found chiefly on each side of the eminence of the veru montanum, but a few may be seen both before and behind it The length of the prostatic urethra varies from 1⅛ to 1¼ inches Its diameter is usually represented by a fixed measurement, but as the surfaces lie in apposition, except when distended by a functional act, it is difficult to represent accurately the calibre The walls and surrounding structures are extensible and the calibre of the canal is consequently variable, corresponding within certain limits to the amount of pressure exerted Without unduly extending them, the diameter opposite the crest of the veru montanum may be placed at $\frac{5}{16}$ to ⅜ inch, but at each extremity of the prostatic limit the diameter is rather less

The whole of the urethra thus examined presents a surface of mucous membrane which is covered with cylindrical epithelium arranged in two layers, a superficial and a deep layer The membrane has, when fresh, a pale pinkish yellow tint, the structures which underlie it being pale unstriped and muscular, connective and elastic tissues, with fewer minute blood-vessels than are found in the membranous and bulbous portions of the urethra, where a redder tinge consequently exists These sub mucous structures are composed chiefly of the pale unstriped muscular fibres, intermixed with a small proportion only of the white fibrous and elastic tissues The muscular fibres are arranged in the longitudinal axis of the urethra and form a thin but somewhat dense and strong layer immediately beneath the mucous membrane throughout the prostate They continue to have a similar relation throughout the canal, although in smaller quantity than in this situation Posteriorly, they are continuous with the muscular layer immediately underlying the mucous membrane of the bladder It is by a development of these longitudinal muscular fibres of the urethra that the veru montanum is formed They divide to define the mouth of the utricle and admit the orifices of the prostatic ducts These cavities are lined with a delicate membrane and epithelium like that of the prostatic urethra itself

The precise mode of arrangement of the minute blood vessels beneath the prostatic mucous membrane is as follows From the neck of the bladder to the most elevated portion of the veru montanum very few of them are to be seen, and the mucous membrane is of a yellowish tint from their paucity in this situation In front of it, however, numerous fine vessels course forwards, side by side, for the most part in the axis of the urethra, but with a slight oblique divergence outwards, right and left of the pale line of the veru montanum prolonged into the membranous portion The mucous membrane is therefore redder in tint anterior to the eminence, and on examining it with a magnifying glass it is seen to be due to the minute and longitudinally branching vessels just described

The utricle or vesicula prostatica just described, is a small sac already referred to as opening on the anterior aspect of the veru montanum It is somewhat oval in form, measuring ordinarily from 2½ to 4 lines in length and from 2 to 3 lines at its greatest breadth, although occasionally found both larger and smaller Its posterior extremity is the widest and the anterior is the narrowest portion It is obliquely placed, the long diameter being directed towards or a little below the median portion and in the course of the ejaculatory ducts, which lie contained in the substance of its lateral walls The external orifice or mouth of the utricle is sometimes extremely small, and it has been seen occasionally altogether wanting The orifices of the two ejaculatory ducts were then found opening on the anterior of the veru montanum The sac of the utricle is made up of mucous membrane covered with cylindrical epithelium and of a sub-mucous tissue attaching it to some bands of white fibrous and pale muscular fibre, by which it insensibly unites with the mass of structures

around It contains mucous follicles which appear sometimes to secrete a dark reddish brown and jelly like material, at least such is found sometimes, nearly filling the sac When in a quiescent state the sides of the prostate urethra are pretty closely applied to each other and the mucous membrane then lies in very small delicate longitudinal plaits, with a very shallow groove between each A transverse section shows the canal to have a form generally approximating triangular, the apex being upwards The common duct formed by the junction of the vas deferens and of a duct of the vesicula seminalis enters, in close proximity with its fellow of the opposite side, at the base of the prostate, about three or four lines below the opening which transmits the urethra There is a well marked depression, in form pyramidal, with the apex directed inwards, in the base of the organ, which corresponds with the apex of the notch separating the two lateral lobes This depression penetrates the substance of the posterior or median portion, about three quarters of the mass lying between the ducts and the urethra, the remaining one fourth forming a thin layer between the ducts and the under surface of the prostate This proportion varies in different subjects, in all, however, the greater part of the mass lies between the ducts and the urethra A thin stratum of tissue one-fifteenth to one twentieth of an inch in thickness separates the two ducts as they perforate the organ side by side They then pass directly to the utricle and continue their course embedded in the walls of that cavity, one on each side, their little slit like orifices opening on the anterior part of the veru montanum, at the mouth of the utricle itself

The ejaculatory duct, from its place of entry at the base of the prostate to the orifice at the utricle, is about six lines in length It is composed of a mucous lining or an inner coat, some pale muscular fibres surrounding it, with connective tissue intervening The muscular fibres are arranged longitudinally in the axis of the duct, and are continued in those which underlie the urethral mucous membrane close to the mouth of the utricle It will be seen from the foregoing description that the pale or unstriped muscular fibre enters largely into the composition of the prostate This was first declared by Dr Handfield Jones, in 1847 In 1848 Kolliker, of Wurzburg, declared that the larger portion of the organ was constituted by the pale muscular tissue, and that the smaller portion only consisted of glandular tissue Subsequently Prof Ellis, of University College, London, Eng , closely investigated the same subject, and came to a similar conclusion

The tissues constituting the prostate passing from the urethra outwards consist, *first*, of the mucous membrane of the urethra, *second*, of a delicate layer of longitudinally disposed pale, or unstriped muscular fibres, mingled with a good deal of connective tissue and some elastic fibres, this layer forming part of a system of longitudinal fibres underlying and surrounding in greater or less quantity the whole urethral canal, *third*, a circularly disposed layer of pale or unstriped muscular fibres of considerable thickness posteriorly, where they become continuous with the circular fibres of the bladder and becoming thinner as they approach the membranous portion, over which they proceed and then terminate This layer contains also connective and elastic fibres like the preceding, *fourth*, beyond this lies the greater part of the glandular structure, properly so called, which intermingles with and is supported by a considerable portion of tissue composed in part of pale muscular fibre and in part of connective and fibrous tissues, which, interlacing with each other, constitute the rest of the organ It is this composite structure which, disposed in masses chiefly in the lateral direction on either side, gives form and character to the organ, *fifth*, the enveloping fibrous capsule just beneath this capsule, or the exterior of the proper stroma of the prostate, is a layer which consists of unstriped muscular tissue, attached to the inner surface of the capsule, and also continuous posteriorly with the external muscular layer of the bladder

The middle layer of unstriped muscular fibre forms a dense interlacing stratum in the meshes of which is found the glandular tissue The latter consists of tubular alveoli opening into elongated excretory ducts lined with columnar epithelium The alveoli are connected together by connective tissue associated with fibrous prolongations from the capsule of the gland, and with muscular tissue, the interglandular connective and muscular tissue being richly supplied with blood vessels and nerves, the arterial supply coming from the internal pudic, the inferior vesical and the hæmorrhoidal Its veins form a plexus, the prostatic, around the gland lying between the proper capsule and the sheath of the gland derived from the recto vesical fascia, and continous anteriorly with the posterior layer of the triangular ligament, and receiving in front the dorsal vein of the penis and ending behind in the internal iliac vein

The nerves of the prostate are the prostatic plexus of the sympathetic, which is derived from the inferior hypogastric or pelvic plexus, the latter plexus being made up by a union of branches from the hypogastric plexus, from the 2d, 3d and 4th, sacral nerves, and a few filaments from the sacral ganglia of the sympathetic It is well known that in certain affections of the bladder, rectum, prostate, etc , pain is felt along the perineum, in the penis, over the buttock, and down the thigh These parts are supplied by the pudic and small sciatic nerves, and the reason for the pain is explained by noticing that the very spinal nerves that join the plexus for the viscera, give off also, the pudic and small sciatic nerves, the former from the third and fourth sacral, the latter from the second and third Thus, the pelvic viscera and the skin of the buttock perineum and external genitals are all kept in association by the same spinal nerves The pain at the end of the penis felt in prostatic affections, and in stone or other maladies involving the bladder neck, is probably explained by the fact that the prostatic nerve plexus, (that supplies both the gland and the neck of the bladder) is continued to the end of the penis as the cavernous plexus It terminates at the very spot where the penile pain is mostly complained of viz at the posterior part of the glans

The ligamentous and muscular attachments of the prostate, the latter of which contribute in some measure to its mobility, consist first of the pubo-prostatic or anterior true ligaments of the bladder, and formed by the anterior border of the recto-vesical portion of the pelvic fascia, which passes from the posterior aspect of each pubic bone at its lower border, as a strong whitish band to the anterior surface of the prostate on its way to the bladder, where it becomes continuous with the fibrous structures which surround the neck of that viscus and belong to its muscular apparatus The muscular attachments of the prostate are the levatores prostatæ Each muscle of this pair arises from an oblique line on the posterior surface of the pubic bone, its most anterior fibres descending to meet those of its fellow just in front of and below the apex of the prostate, its middle and posterior fibres continuing to be inserted along the lateral borders In this manner the organ is, in a measure, suspended in its place

From the foregoing description we see that the prostate gland is not in the sense in which we describe the kidney, or the liver, or the heart, an organ composed of structures separable from and independent of the surrounding tissues, but as we have seen all its tissues except the glandular, form a part of and are continous with adjoining structures We notice too, that according to the most careful and reliable observers, such as Kolliker, Ellis, and others, that the glandular element constitutes one-third or less than one-third of the whole organ, so that it is more correct, anatomically to speak of it as a muscle We must also bear in mind that the glandular element is found chiefly in the posterior part of the two lateral lobes, and in the posterior commissure, none in the anterior commissure

Pathology —The most common as well as the most important, morbid states to which the prostate is subject, either consist in, or are associated with deviations from the natural size and form, as well as from the natural disposition of the structures entering into its composition Enlargement of the prostate commonly called hypertrophy, is an affection of a certain proportion of men after passing the prime of life, or to speak more definitely, the 55th year It is not an hypertrophy, inasmuch, as it is not, as a rule, a symmetrical growth of all its parts and tissues, but the enlargement affects sometimes one, sometimes both lateral lobes, sometimes the median portion alone, sometimes one lobe and the median portion, and sometimes the anterior or the posterior or both commissures Thompson found, as a result of the examinations of 123 enlarged prostates—found in four of the principal museums of London, including that of the Royal College of Surgeons—that in 74 cases, both lateral and the median portion were pretty equally enlarged In 19 cases, both lateral and median portions enlarged, but the latter in greater proportion than the former In 8 cases, general enlargement, but the right lobe predominating and very decidely larger than the left In 11 cases, general enlargement, but the left lobe predominating In 5 cases, lateral lobes only enlarged In 3 cases, the anterior commissure only or chiefly enlarged, and in 3 cases the lateral lobes and anterior commissure only enlarged, median portion being normal

The results of Dr Messer's examinations practically agree with Sir Henry Thompson's, and both observers found from the examinations of the prostates of 164 men at and above 60 years of age, that senile enlargement of the prostate, so far from being a change, invariably or even usually present in elderly men, is an exceptional condition, this condition affecting to a greater or less extent about one in three individuals, and that in about one in seven or eight the senile change was sufficient to produce appreciable symptoms during life

The character of the enlargement is not such as follows an inflammatory action, nor is it caused by any of the results of inflammation corresponding with those produced by the action of inflammation in other organs, but is a slow and gradual process due to an increased formation of tissues naturally present in the prostate itself or analogous thereto The enlargement may be due to a proportionate increase in both the stromal and the glandular elements, constituting, if the whole organ is affected a true hypertrophy, or the stromal constituents may be developed largely in excess of the glandular constituting stromal hyperplasia, or we may have an excessive glandular development constituting glandular hyperplasia, or we may have a rearrangement of the normal structures of the prostrate, fibrous and glandular in the form of tumors

The etiology of senile enlargement of the prostate has been a subject for theorizing and speculation since the days of John Hunter, who, while he said nothing directly as to its cause stated that he had seen anti-scrofulous remedies used in several cases Sir E Home, attributed it to the slow return of blood from the neck of the bladder, or in other words to passive congestion Sir Charles Bell considered it to be caused by any source of irritation which produced frequent contractions of the organ Astley Cooper believed it to be a normal senile change such as the arcus senilis or the ossification or calcification of the arterial coats Sexual excesses and celibacy have both been charged with being the causal factor Desault, Amussat, Civiale and Mercier, all discuss the subject but do not agree as to the cause The theory of Thompson is that the prostate being homologous to the uterus histologically, possesses the same inherent tendency to generate and develop fresh elements identical in character with those proper to the structure of the organs This tendency only existing during a certain limited period of life, say in general terms between 35 and 50 in the female and between 50 and 70 in the male, in the one case appearing in the form of uterine hypertrophy or tumor, in the other in that of prostatic hypertrophy or tumor These phenomena in the female are observed perhaps with greater frequency in the virgin than in the impregnated female, showing that they do not depend upon any force called into play by pregnancy, but are possibly inherent in the structure of the organ This theory

of Thompson's would certainly seem more plausible than the others and may I think be adopted in the absence of a better one With regard to the rapidity of senile enlargement, Thompson believes that may be influenced by those conditions that many eminent observers believe to be the cause of the enlargement itself, viz all forms of irritation and congestion In other words, the vital process of growth and tissue development are quickened and favored by whatever favors an increased supply of blood to the organ

One of the most important results of the anatomical changes that take place in the prostatic urethra and the neck of the bladder, as the result of enlarged prostate, is the interference with the normal flow of urine from the bladder Now, the amount of obstruction is not in direct proportion to the enlarged condition of the prostate, but rather depends upon the character of the enlargement Obviously, one of the first effects of an enlargement that is symmetrical or nearly such, is a lengthening of the prostatic urethra, but this alone need not cause the obstruction If the increased tissue is confined entirely to the lateral lobes or if in addition the median portion be but slightly increased the posterior urethra becomes lengthened, narrowed from side to side, but increased in its vertical diameter, so that no obstruction, or but slight interference with the outflow of urine results Again, if the enlargement is confined to one lateral lobe the prostatic urethra become elongated and curved with the convexity of the curve towards the normal lobe When we have enlargement of the median portions of the prostate, obstruction is likely to follow but not necessarily The growth may be centric or it may be eccentric or peripheral In the latter case we may have no obstruction while a very moderate degree of central enlargement of the median portion may present an obstacle to the urinary outflow of the most serious nature, so that one cannot decide absolutely by a tactile rectal examination, as to the extent or character of the prostatic barrier In some cases we may find on rectal examination a growth of the median portion presenting to the finger a very large and firm tumor, and yet in passing the sound the beak enters the bladder with only a very moderate depression of the handle showing the enlargement to be of eccentric character Of course the converse of this proposition holds true With a scarcely perceptible encroachment upon the rectal calibre, we find when the sound enters the prostate it comes to a sudden halt, and will only advance when the point is turned vertically, or nearly vertically upwards

From what has been said relative to the effect upon the outflow of urine, of the different forms of prostatic enlargement, we can with little difficulty foresee that the symptoms will depend upon the part of the prostate affected The rapidity of the increase of the abnormal tissue and the presence or freedom from exciting causes, such as exposure to cold, indulgence in wine or malt liquors, etc The first symptoms are a diminution in the degree of force with which the urine is expelled, next a hesitation in the appearance of the stream after voluntary effort, then frequency of micturition due to overflow from retention, feeling of weight, fulness and uneasiness about the hypogastrium, rectum and perineum, and these symptoms, unless obviated by the judicious use of the catheter and a proper attention given to the condition of the bowels, the diet, and the avoidance of excesses of all kinds, with a view to prevent all congestions and irritations of the affected tissues, gradually lead to complete urinary retention and bring us face to face with the question of palliative versus operative measures

If we stop a moment to consider the vast number of factors that may contribute to bring about an inability to empty the bladder, and the ever-varying degree in which each one of them may preponderate, we must, I think, admit that no hard and fast line of treatment can be recommended to overcome urinary obstruction associated and more or less dependent upon prostatic enlargement No one would think of proposing an operation until palliative measures had been exhausted, until the degree of atony of the bladder, if present at all, had been determined, and further, the enlargement ascertained to be of the median portion, and of such shape and relation to surrounding parts that it can be isolated, and when isolated and removed offers a reasonable prospect of relieving the obstruction Mercier, who operated 300 times previous to 1856, for prostatic obstructions, and obstructions caused by a bar of mucous membrane, or mucous membrane and sub-mucous muscular tissue at the neck of the bladder, was of the opinion that it was a safer operation to crush the obstructing part than to excise it

In more recent times, during the early part of the last decade, Professor Bottini has adopted the method of removing the prostatic obstructions by means of a wire heated by the electric current Professor Guyon, of Paris, who examined three patients of Mercier some considerable time after the operation, was not pleased with the result, and adds, when we examine the pathological specimens which the autopsies of prostatic patients have furnished, it is rare indeed to meet with an organ so formed as to afford the slightest hope that by any proceeding of incision or excision an iota of benefit could have accrued to the case Landerer, of Leipzig, reports, in the *Deutsche Zeitschrift fur Chirurgie*, that in doing the median operation for stone, he accidentally crushed off two pieces of the middle lobe, he then removed the whole of the projecting body The wound was healed in 14 days and the patient could urinate with a full stream This favorable condition has now lasted 1½ years, so that he does not hesitate to recommend the operation of crushing of the middle lobe through the median perineal incision In America, the operation of removing a part of the middle lobe by excision has been done by Belfield, of Chicago, and by others, but as to the present condition of the patients I am ignorant.

As this paper has already reached an undue length, I will close here, leaving what I have to say as to other forms of prostatic disease, together with clinical memoranda, for further consideration

THE GRADUAL PREPARATORY TREATMENT OF THE COMPLICATIONS OF URINARY AND FECAL FISTULÆ IN WOMEN,

Including a Special Consideration of the Treatment of Pyelitis by a New Method, and the Prevention of the Evils of Incontinence of Urine by a New System of Drainage

Abstract of a paper read before the Section in Gynecology of the Ninth International Medical Congress

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In the course of my experience in the treatment of urinary and fecal fistulæ, as I encountered new difficulties, I have described from time to time the cases and the means by which I endeavored to overcome them, but all, especially the more recent of my results have not been published The object of the paper, of which this is an abstract, is therefore, to set these latter before the profession, and to combine them with what I have already written In this way, I hope to communicate, in a more systematic manner the results of my experience and observations, in this department of the subject of fistula, which have extended over a period of 34 years The object of my method of treatment, preparatory to the performance of the operation for the closure of a fistulous opening, is to prevent and overcome the injurious effects of incontinence of urine, and to remedy the complicating injuries and diseases of all the organs involved In other words, to remove as far as possible the obstacles in the way of the easy performance and success of the final operation, and to cause the diseased tissues to return to a state of health, so that, not only will the incontinence of urine be cured, but the functions of all the organs be preserved

Treatment and Prevention of the Effects of Incontinence of Urine—Inflammation and ulceration of the vagina, vulva and buttocks, due to the contact of ammonical urine, may be treated in the usual way, by cleanliness and by stimulating and astringent applications Although by these measures, the sufferings of the patient are relieved to a considerable extent, when for any cause, the closure of the fistula is long delayed, it is of the utmost importance that we should possess some form of instrument by which the urine may be drained away, and its contact with the mucous membranes, integument and linen of the patient be avoided

After many experiments, I have recently devised an instrument which accomplishes these results in a satisfactory manner, and have also been able to combine, in the same instrument, drainage with the dilatation of cicatricial contractions of the vagina The forms of the instrument, which concern us here, are intended to secure drainage alone, and I have called them utero-vesical and utero-vesico urethral drainage supports The former is applicable to most cases, to all positions of the body and is the most convenient The latter is suited to the recumbent position and to cases where the perineum is lacerated These instruments can be introduced and removed by the patient, whenever necessary and without difficulty They are self-retaining, small, simple, free from angles and sharp borders, are readily kept clean, excite no discomfort or irritation of the vagina, and do not press upon the rectum or bladder, nor interfere with locomotion

While possessing all these qualities in a high degree, they collect the urine, and conduct it away with a degree of perfection that, to the patient, is a constant source of wonder and delight I have now five cases in which the different forms of the instrument are in use In one of these cases, there is entire destruction of the urethra In all, the instrument functions perfectly

The Treatment of the Complications of Urinary and Fecal Fistulæ—Very few cases of fistula are simple The same cause, the pressure of the child's head, which produced the perforation of the vesical or rectal wall, injures to a greater or less extent other parts of the vagina and frequently the uterus, ureters and urethra These injuries and the distortions of the structures involved, the result of the contractions of the cicatricial material produced in the healing process, constitute the most frequent complications In the worst cases, to them are added subsequent disease of these organs and the bladder, and fixation of the uterus, the consequence of puerperal cellulitis and peritonitis

Cicatricial Contractions and Distortions of the Vagina—General thickening and rigidity of the vaginal walls and narrowing of the vagina by the presence of cicatricial bands and adhesions, render the exposure of the fistula difficult, and tend to prevent the easy approximation of its borders The operation for closing the opening is thus made difficult, and owing to great tension, the sutures cut, and it fails

The means by which I overcome these difficulties, are mainly, division of the cicatricial material and gradual dilatation of the vagina In cases in which the vagina is very much contracted my method consists, first in the section of all the prominent bands and adhesions, and afterwards in the dilatation of the vagina with hard and soft instruments

When it is neccessary to give ether, the patient is placed in the knee chest position and secured by means of an apparatus which I have had constructed for the purpose In the ordinary treatment of the case, this is unnecessary, I place the patient simply in the supported knee elbow position The parts are exposed to view by means of my dilating speculum, and perineal elevator, and the bands, which are at the same time rendered tense and prominent by these instruments, are divided while on the stretch by means of sharp and probe pointed bistouries, and the peculiar knife which I show you

The subsequent dilatation of the contractions of the vagina is produced by hard and soft dilators On account of differences in form and in the manner in which they are used, I have divided them into two classes, the vulvovaginal and intravaginal

The hard dilators, which I show you, are made to combine drainage with dilatation The vulvovaginal can be distinguished from the intravaginal by their greater length, and the beak-like extremity which

rests on the perinæum The intravaginal instruments are worn altogether inside of the vulva, and rest upon the posterior surface of the arch of the pubes and perinæum A set of the vulvovaginal dilators consists of five sizes, ranging from 30 to 50 millimeters in diameter, and a set of the intravaginal of eight sizes ranging between 30 and 65 millimeters

The soft dilators are made of coarse sponge covered with oil silk, and may be of any size up to 70 millimeters in diameter or larger if necessary The difference between the vulvovaginal and the intravaginal forms of these soft instruments is that the former are made longer but never so large, the sizes being graded like the hard instruments I have been unable to combine drainage with dilatation, when the sponge instruments are used, but if they are frequently removed and the urine which they absorb, squeezed out, the vagina and vulva may be kept comparatively dry Althought only a very imperfect sort of drainage, which I have called sponge absorption, can be obtained with sponge dilators, they are superior in many respects to the hard instruments A much larger dilator can be introduced and being soft, it causes less pain In virtue of its elasticity, the sponge accommodates itself to the shape of the vagina, when the organ is irregularly contracted and by the imbibition of urine, increases in size after introduction

Time, patience and perseverance are all that are necessary to produce by the gradual division of opposing cicatricial bands and the systematic use of larger and larger dilating instruments, a distension of the vagina nearly equal to that caused by the child's head, at the time of the injury As the dilatation proceeds, the exact nature of the lesions becomes more evident, and the form and relations of the fistula to the surrounding structures are more distinctly exposed to view, the cervix uteri which was perhaps altogether hidden, becomes visible, and the anterior and posterior culs de sac are restored, the vaginal walls are relaxed and the uterus made movable The mucous membrane of the vagina loses its fiery red hue and assumes a natural pink color, the inflammatory thickening of the vaginal walls melts away beneath the pressure, and the borders of the fistula lose their leather like hardness, become smooth and soft, and may be more easily approximated

Fixation of the Uterus —When there is great loss of tissue at the fistulous opening and the uterus is fixed, the remnants of the septum can never be sufficiently stretched to bridge the interval The uterus must be rendered movable so that the cervix can be drawn down, and made subservient to the closure of the opening

The fixation of the uterus may be overcome by upward pressure, made with the dilators already described and by a sort of passive motion of the uterus, which is secured by traction, frequently repeated, with a hook fastened in the cervix

The practical use of these measures is sufficient to demonstrate their efficiency, but, in order to render the results obtained by them clear to all, I made an experiment, while in Vienna, in 1875, on a case of fistula, in which there was immobility of the borders, due to fixation of the uterus, the results of this experiment have been reported by Bandl [1] At the beginning of the treatment, the edges of the opening could not be approximated by any amount of force After the section of the band and dilatation of the vagina had been continued for 4 days, they could be brought together imperfectly, by the exercise of 2,800 grams of traction, measured by a spring scale After the continuance of the treatment for 17 days longer, 120 grams were sufficient for this purpose, and the operation for the closure of the fistula had become easy

The advantages, secured by the use of these preparatory measures, are also well illustrated in certain more special forms of fistula By the aid of my button suture, and these preparatory measures, with the modifications which I have described fully in my paper, I have been able to treat successfully vesico uterovaginal fistulæ with incarceration of the cervix uteri in the bladder, restoring the cervix to its natural position in the vagina and closing the vesical opening without the formation of a pouch in the bladder, I have been able to reach and to close vesico uterocervical fistulæ, attended with loss of tissue, even when the opening was situated entirely above the vaginal junction, and have met with the same success with recto utero vaginal fistulæ, with incarceration of the cervix in the rectum All these conditions have been, and are still, considered without remedy, except by kolpokleisis, occlusion of the os uteri, or by the perpetuation of the incarceration of the cervix in the bladder or rectum

Cystitis, Contraction and Prolapse of the Bladder are frequent complications and must be treated

The principal cause of *cystitis* is the retention in the bladder of stagnant pools of urine in pouches of the mucous membrane, or as the result of imperfect drainage of the urine through the fistulous opening The saculation of the vesical mucous membrane at the base of the bladder, is due to the distortion of the anterior wall of the vagina by cicatricial bands

The treatment of cystitis consists, therefore, in the frequent irrigation of the interior of the bladder, and the obliteration of the folds of the mucous membrane by dilatation of the vagina

Atrophy or *contraction* of the bladder is best treated by obturation of the fistulous opening, by means of an oiled silk sponge dilator placed in the vagina A sufficient quantity of urine is thus retained in the bladder to gradually distend its walls

A *prolapsed bladder* should be reduced in the supported knee chest position, the abrasions of the mucous membrane touched with nitrate of silver, and the reproduction of the condition prevented, by filling the vagina with one of the forms of dilators already described

Injuries of the Ureters —One of the ureters may be opened by a slough, which does not penetrate the whole, thickness of the septum By an injury of this kind, a uretero vaginal fistula is formed One or both of the ureters may also form, a part of the border of a vesico-vaginal fistula In the first form

[1] Wiener Medizinische Wochenschrift Nos 49-52 1875

of injury, the ureter must be turned into the bladder before the fistula is closed, thus converting it into a vesico uretero-vaginal fistula In all cases, when the ureters are involved, unless they are slit up on their vesical surfaces, the orifices are liable to be obstructed by the sutures or be occluded by the apposition of the borders of the fistula This little operation is best done, as a preparatory measure, long enough before closure of the fistula to allow healing to occur Stenosis and eversion of the orifices of the ureters frequently occur in these cases, and it is therefore important to ascertain before closing a fistulous opening, whether these conditions exist When such a condition is present, the lower part of the ureter should be divided, and the incision should extend through the vesical mucous membrane, and be followed by dilatation with sounds, if necessary

Pyelitis —The causes, which lead to the development of pyelitis as a complication of fistula are, cystitis and obstruction of the ureter The principal symptoms, which I have observed to be present in this disease, are more or less constant pain in the lumbar region, attacks of renal colic, nausea and vomiting, anæmia, emaciation and the cachexia of chronic suppuration At times, the course of the disease is varied, by the occurrence of severe rigors, accompanied and followed by great pyrexia Pus and blood may be seen to exude from the orifice of the ureter which is exposed to view by the fistulous opening

I have recently devised a new method of treatment for this disease, and have used it in two cases, both of which are now cured It consists essentially, in dilating the ureter and washing out the pelvis of the kidney by means of a catheter

In my first case, which I have reported at length in my paper, the pyelitis involved the pelvis of the left kidney, and occurred as a complication of the large urethro vesico-utero vaginal fistula, implicating both ureters and the greater part of the septum It probably was occasioned by the obstruction of the orifice of the ureter, due to the contraction of the cicatricial border of the fistula, of which it formed a part

The patient was suffering, from frequent paroxysms of renal colic, rigors were occurring at short intervals, and her temperature was constantly elevated, ranging between 102° and 105° Pus could be seen exuding in considerable quantities from the left ureter The patient was emaciated and her complexion was pale and sallow She was evidently rapidly dying from exhaustion, induced by the fever and the pain

The condition of the patient continued to grow worse, and the case more hopeless, until December 26, of last year, when I passed a small olive-tipped catheter through the ureter into the pelvis of the kidney Carbolized water was then injected with a syringe, and a small quantity of fœtid pus washed out The catheter was allowed to remain in place 24 hours without causing any evil consequences, and the irrigation of the pelvis of the kidney repeated, at frequent intervals Afterwards the douching was repeated daily, the catheter being introduced and removed without difficulty

The condition of the patient improved after this treatment was begun with remarkable rapidity, the temperature became normal in 24 hours, the pus gradually diminished in quantity, and, at the end of six weeks entirely disappeared The patient has since gained about thirty pounds in weight, her general health has become good, and the fistulous opening is now ready for operation

In the course of the treatment of this case, I made several interesting observations on the relative secreting capacities of the two kidneys, the details of which I have not time to tell you in this abstract I also caused to be constructed the flexible steel renal sound which I show you It is intended for purposes of diagnosis rather than of treatment, but was of service in this case, in dislodging the detritus from the pelvis of the kidney

Encouraged by my success in this case, I conceived the idea of extending this method of treatment, to cases of pyelitis when no fistulous opening existed Fortunately, I soon had an opportunity Mrs B came under my care She gave a history of symptoms similar to those already described Hæmaturia formed a marked feature of the case, and had continued for 2½ years The pelvis of the right kidney was suspected from the location of the pain to be the seat of the disease In order to expose the right ureter, an opening was made in the bladder at a point where it pierces the vesical mucous membrane

The name which I suggest for this new operation is kolpo-uretero-cystotomy, it is appropriate because it corresponds with the established nomenclature, and serves to distinguish the operation from kolpo-cystotomy done for cystitis, and kolpo-ureterotomy, which may be done in future

When the orifice of the ureter was thus exposed, blood was seen exuding from it The ureter having been made accessible, the subsequent treatment was the same as in the previous case, and the result equally fortunate The discharge disappeared in a few weeks The use of my utero-vesical drainage support prevented all inconvenience from incontinence of urine, and made the patient so comfortable, that haste in closing the opening was considered unnecessary She was therefore sent home to Charleston, and instructed to return for this purpose, when she was stronger and fully restored to health

She wrote me on August 12, the following account of her condition "The drainage works perfectly There is no escape of urine, except sometimes a little while lying down I do not suffer from any irritation whatever The instrument keeps the uterus in position I have not suffered any pain in the kidneys I feel better than I have for years I have just weighed, so will acquaint you with the numbers—109 pounds, having gained 19 pounds in 3 months, (that is, since the operation) I am able to attend church services I can either ride or walk Neither gives me any uneasiness My friends look at me, and speak of my improvement with astonishment"

All the complications of gravity of urinary and fæcal fistulæ having now been studied, what I have

already said, may be, in conclusion, enforced by a brief summary of certain important facts and principles, and an enumeration of the results that I believe may be secured, by the employment of the methods of treatment which I have described

1 The importance of the complications of fistula has not been duly appreciated They form in many cases the principal difficulty in the way of the successful performance of the operation, for the closure of the fistulous opening In other cases, when the fistula is cured, but the complications left without treatment, they lead sooner or later to suffering or to the death of the patient The greatest care should, therefore, be taken to discover and remove them

2 Kolpokleisis, occlusion of the os uteri, and incarceration of the cervix in the bladder or rectum, are unjustifiable operations They destroy the functions of the genital organs, and lead to cystitis, the formation of renal and vesical calculi, pyelitis, and other grave diseases Moreover, they are unnecessary operations By means of the gradual preparatory treatment of the complication, and, by the aid of my button suture, and dilating speculum, I have been able to overcome all the difficulties which have been described as indications for their performance

3 The association of intra-vaginal drainage with dilatation of the vagina, is a great improvement The inconvenience and evil effects of incontinence of urine are thereby lessened, and the duration of the treatment is shortened, by the more rapid healing of the incisions, and the formation of less cicatricial material in the reparative process

4 We now possess a means of palliating the suffering due to incontinence of urine, in the small percentage of cases of fistula which are incurable by any method—even the dangerous one of kolpokleisis I believe some form of drainage instrument may be adapted to every case, and these patients may be thus restored to the enjoyment of life, and the performance of its duties

5 The possession of a system of drainage will widen the scope of the operations of kolpocystonomy done for cystitis, by removing the evils of incontinence of urine, now the chief objection to its performance

6 Finally, I believe the operation, which I have called kolpo uretero cystotomy, followed by the exploration and treatment of the diseases of the ureter and pelvis of the kidney, has a brilliant future of usefulness before it In the treatment of pyelitis, renal calculi and obstruction of the ureters, it will restrict within narrow limits, the operations of nephrotomy and nephrectomy

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PRACTICAL REMARKS ON THE CAUSES AND TREATMENT OF ENTERO-COLITIS IN INFANTS

Read in Section on Diseases of Children, at the Thirty Eighth Annual Meeting of the American Medical Association

BY S B SPERRY M D ,
OF DELAFIELD WIS

Believing as I do that much of this disease is due to ignorance and negligence on the part of nurse or mother, and that the physician is largely to blame for the same, I purpose in these remarks to refer to some of the common mistakes of nurses that have come under my observation, and to speak of the correction of the same The fatality of this disease, and its importance, the possibility of doing so much towards its prevention, are reasons enough for this paper being read I think it is within the bounds of truth to say that two thirds of the cases could be prevented if we had the power of making mothers do what is right, and of overcoming their ridiculous prejudices

It is more evident that this subject of the causes should be considered when the failures are due to small things which only too many physicians consider insignificant and beneath their notice The principal cause of entero colitis is undoubtedly improper food, *plus* certain causes over which we have no great control Indeed, I have never seen a case in an infant properly fed Teething, heat, age, play their part, but are not properly causes Is not the history of almost every case about this "Why Doctor, the baby has always been so well—we never have had any trouble with it—it has gone to the table with us, and eaten *just what we did* The baby had diarrhœa a few weeks ago, but has been getting better off and on until a few days ago it got very bad" This is the usual story *Eaten just what we did* is the key to the whole story Not satisfied with its doing well they must urge it on and take it to the table because it *seems* so hungry or some kind neighbor thinks the baby too poor or that it ought to have something to eat to strengthen it It is perfectly astonishing to find how few mothers give a thought as to how an infant should be fed They may be careful about its clothing, about its bath, about the temperature of the room, but know absolutely nothing when they come to its food It is a man on a small scale, they reason, and it needs man's food on a small scale—and it usually gets it Ask one of these mothers how they feed the baby "Oh, I nurse it," which is just the best half of the story Unless we are very careful in questioning we will not find out what is most important to know, that she also feeds the infant

This is by no means so insignificant a thing that we can pass it over We fail just because we are not careful as to just such things as these Now this infant we speak of has breast-milk, and what else? potatoes in all human probability, or oatmeal or rice We all know that intestinal digestion is at its minimum in infants, and although some of the starch may be digested most of it acts as an irritant and passes off undigested By these repeated insults to intestinal digestion we finally have set up a catarrh, an entero-colitis, mild at first, but getting worse with periods of improvement, each relapse being worse and leaving the infant in a half starved condition I believe it is a common and great fault with physicians in neglecting to find out *exactly* what the infant has been fed on Improper food—too much—and food too often is what causes this disease, and that this is not gone into thoroughly is why the disease is not cured It is not usually for a lack of skill in applying drugs that physicians fail, but in dealing with the

food, an indifference or failure to understand the absolute importance of the question Mothers must be continually watched, questioned and instructed over and over again

What tries our skill and patience are hand-fed babies For it is hard to get the proper food and harder still to keep the mother to one kind The only hope is to have the full confidence of the nurse or nothing can be done I know of no better way than to instruct them fully as to infant digestion—the value of foods—why it should have this and why not that Mothers are continually saying "Why don't physician's publish books on this subject?" but even with the excellent works of Jacobi, Keating and others they need the verbal instructions, they want the physician to show interest in the case I also warn them against seductive advice of friends They must be taught that artificial food requires careful consideration and trial before we find just what the infant needs "Line upon line—precept upon precept," over and over again must they be instructed, and not until then will you have them safely and surely in your hands Young mothers must especially be warned against the woman who talk about what their mothers used to do It is much easier to get ahead of these women than correct their bad advice

The pathology of entero-colitis is simple, and all I wish to call attention to is, that the liver and stomach remain comparatively free from disease until the last The vomiting is probably caused by the inflammation around the ileo-cæcal valve In the last stage passive congestion of the different organs is likely to supervene, especially of the brain and lungs

The treatment may be considered under two heads dietetic and medicinal

The diet for infants should be but one thing, milk If it is an infant that is fed on breast milk then we are to emphasize the fact that nothing else should be given, no bread, no crackers, nothing farinaceous Sometimes, when the diarrhœa is very severe, it will do to stop the milk in part or wholly, substituting for it beef-tea and toast-coffee If it is hand-fed what shall it have! Last year I presented a paper before this Section on this subject, entitled "The Best Substitute for Mother's Milk" Another year's experience confirms me in this belief that it is a perfect substitute The mixture consisted of fresh cow's milk diluted with barley-water and sweetened with sugar of milk—it is simple and easily prepared, and it is very necessary that it should be properly prepared How shall we tell the nurse to prepare this food? First, only enough should be prepared for each time See that the milk is not sour, and know whether it is skimmed or unskimmed The nurse will be unable to tell whether it is sour unless she have some test paper, which you should provide for her If acid it should be corrected with bicarbonate of soda or lime-water Should lime-water be used do not carry the dilution too far The barley-water is prepared by adding a pint of boiling water to two table-spoonfuls of granulated pearl barley and after boiling for five minutes remove and strain

Now, the first you know the nurse will be adding no barley, or will not strain it, and boil too long I have also had them add *half a cup* of pearl-barley instead of a table-spoonful or two, with the idea that it would make the child grow It may be prepared as directed in Meigs' mixture, the milk sugar being added to the barley-water When it is to be used all that is necessary is to heat the prepared barley-water and add it to the milk The milk should not be boiled (as it has been shown that there is an indescribable, unmeasureable something lost) unless you wish medicinal effects from it Milk sugar should always be used, and the reason given the nurse for so doing

With this food you have a perfect substitute for mother's milk If then the infant is not getting proper food change its food to this mixture, and then correct the catarrhal condition and flatulency with soda, bromides and some mint During the very bad spells the diet must be entirely changed and the work taken from the irritated intestines, and thrown entirely upon the stomach by giving beef-tea and toast-coffee, ½ to 1 teaspoonful of beef-tea and toast coffee as it calls for it As the symptoms abate I return to the milk diet

As for the medicinal part of the treatment, I use bicarbonate of soda, bromide of potassium and tincture of hyoscyamus I correct the irritable and painful condition of the mucous membrane with mild counter-irritation, and then give $\frac{1}{20}$ or $\frac{1}{30}$ of a grain of aloes in a triturate every 3 hours, which acts as a tonic or by its substitutive action

But it is in the stage of collapse that I have seen some remarkable results by giving large doses of chloral After losing some cases of the disease when following well-known authorities, I came to the conclusion that something different must be done Very soon I had an opportunity to try an entirely new plan One night I was called out into the country to see a baby which was very sick with "summer complaint," and the messenger told me he did not think I would find the child alive I found the child (7 months old) half conscious, rolling its head from side to side, which it had done for the past 24 hours, eyes but half open, head hot, pulse weak, rapid and irregular, extremities cold It would drink half a dipper of water at a time, and it would go literally through it The child had been sick two or three weeks, and with the usual history I gave the child five (5) grains of chloral, which it kept down It was asleep in 5 minutes, and I had it placed in its cradle with bottles of hot water placed to its feet and body, and cold to its head I also had some beef tea made immediately, and toast-coffee, the beef-tea to be given every 3 hours, a teaspoonful, and the toast-coffee whenever it wanted drink Brandy was added to the toast-coffee The child was made to sleep for 24 hours with chloral, and the irritability of the digestive tract was overcome by bismuth and calomel, and quinine as a tonic

In two days it was decidedly better, and then the milk was gradually given it, with strict injunctions as to preparing it The child made a good and rapid recovery After this I had other cases like it and found chloral entirely satisfactory The object in giving full doses of chloral is to get the brain entirely insensible to reflex action These large doses may

seem risky, but small doses are not sufficient Even in pseudo hydrocephalus I do not think chloral is contra-indicated, as it relaxes the arterioles, thus bringing the blood to the surface

ABSTRACT OF A PAPER ON ANTISEPTICS IN MEDICINE AND SURGERY

Read before the Medical Society of the District of Columbia, May 4, 1887

BY M G ELLZEY, M D,

PROFESSOR OF CHEMISTRY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF GEORGETOWN, D C

It is no longer an hypothesis, but a scientific fact, clearly and unequivocally established, that certain bacteria are necessary factors in the causation of certain diseases One question remains only debatable Which are and which are not germ diseases? It may be debated whether the bacteria and their spores or their poisonous excreta be the actual *materies morbi*, but this is a question of secondary importance It is of the very utmost importance to the progress of scientific medicine and surgery that the entire life history of these low organisms should be fully known, to the end that the unscientific rubbish which obscures the subject may be brushed away, and the facts of essential importance brought within reach of the profession in a clear, compact and manageable form The first essential fact in the natural history of the group is that all these lowly forms belong to the lowest group of plants known to naturalists Some of them cannot live in the presence of free oxygen, others need a limited supply of that gas Organic matter, a limited supply of oxygen, water, and salts are the generally essential conditions for the reproduction, growth and development of disease-producing bacteria and micrococci Hence the dangerous character of damp, dark and dirty places, and hence the inestimable value of scrupulous cleanness, effectual drainage and free ventilation, with free and copious supplies of light for all places of abode, and above all for hospital wards and sick rooms These are nature's great antiseptics, more and greater than all bichlorides and carbolic sprays It is among the tissues of the higher organisms that the optimum of the life conditions of bacteria would be found, except for the domination of physiological energies over the whole area of their environment Before the organic matter of living tissue can furnish pabulum for bacteria the tissue must first die in whole or in part, and the power with which bacteria are endowed to surround themselves with *toxic* excreta brings them into formidable resemblance to beasts of prey, that kill first and then devour We see, then, how everything which tends to weaken the physiological forces of the organism, to lower the general vitality, prepares the way for a fatal assault by swarming multitudes of pathogenic bacteria

It is for the destruction of bacteria and their spores that we use antiseptics So long as we are dealing with refuse materials and substances outside the living body we may use disinfectants in any degree of concentration necessary to secure their efficiency, or, following the Mosaic decree, we may even burn such materials with fire But within the living body we are met by the limitation of the power of the organism to withstand the action of efficient germicides Man cannot withstand the toxic action of any known reliable germicide in germicidal strength Germicidal medicine, therefore, is beyond the possibilities of the present We cannot kill bacteria or micrococci, still less can we kill the spores, after they have gained access to the interior of the living body Our therapeutic measures must have reference to the possibility of rendering the fluids and tissues more or less unfavorable media for the development and nutrition of pathogenic bacteria, and of strengthening and fortifying the vital resistance of the tissues It is not possible to make of the fluids and tissues of a man's body a germicidal pickle until after the man is dead, and from the way some dissecting rooms smell, one would think not easily then

It is much to be regretted that our knowledge of the limits of the germicidal powers of the best of the known germicides is far from being exact The spores of these bacteria possess resisting powers against the action of the best germicides enormously greater than do the developed bacteria themselves No two bacteria and no two of the different spores possess the same resisting power against any particular germicide The medium in which the bacteria may have been developed, and the medium in which they are brought in contact with the germicide, influence their resisting power to a very important but as yet undetermined extent A particular medium may increase the resisting power of one and greatly diminish that of another of these bacteria Blood serum, being an alkaline fluid, nearly destroys the germicidal powers of iodine by converting it into iodide, whereas it tends rather to increase than to diminish those of mercuric chloride Yet the germs themselves will be more vigorous and harder to destroy in the living body than in pure chemical solutions, in which an arrest of their nutrition may bring the germicidal powers of starvation to the aid of the drug If, then, we have determined the degree of concentration of the solution of mercuric chloride necessary to destroy anthrax germs in chemical solutions outside the body, we are not in a position to determine the necessary strength to destroy the germs and spores of disease germs of other species within the abdominal or utero-vaginal cavities or in a superficial wound, or in any individual subject, seeing that we cannot calculate the factor of vital resistance Temperature is a potent factor in the life conditions of these organisms, as Pasteur has beautifully shown We do not know the optimum of temperature for septic germs With regard to some of the most formidable disease germs Pasteur demonstrated the optimum of temperature to be 100° F, whereas 106° F was fatal to their development within the fluids and tissues of living animals—facts which have some tendency to make us pause in our antipyretic enthusiasm

It is frequently stated in the journals that mercuric chloride is fatal to germs and spores in strength of 1 to 20,000 or less, whereas it is safe as an antiseptic

injection or irrigant in strength of 1 to 2,000 Neither of these statements is correct The best experimenters place the germicidal powers of mercuric chloride at from 1 to 5,000 to 1 to 6,000 for developed germs, 1 to 1,000 for spores after direct continuous exposure to full strength from ten minutes to half an hour, de la Croix found germs still to develop in meat juice at a bichloride strength of 1 to 8,000 Most of the results of this observer are confirmed by Koch Brunton concludes that the only reliable germicide to destroy these organisms by merely brushing over the infected articles is bichloride of mercury, that is, to destroy both germs and spores, and that a bichloride solution even as weak as 1 to 1,000 seems effectual after after a *few minutes'* exposure These statements contain the latest results of our latest observers, and the extravagant statements above alluded to cannot be derived from competent authority

As to carbolic acid, its germicidal powers are surprisingly low It is not reliably germicidal in media favorable to its action in less strength than 10 per cent Carbolized oil, once so much used, is scarcely germicidal in strength of 50 per cent Carbolized sprays are wholly worthless, and those merely scented solutions so much in vogue are equally useless Such sprays and solutions may indeed, and often do, produce toxic effects upon operators and patients, but are innocuous to germs and spores In view of known facts it ought to be clear to the humblest understanding that carbolic acid is useless as an antiseptic in sufficient concentration to make it a deadly poison to man The use of dilute solutions and sprays in surgical practice is not founded in any scientific justification It cannot prove destructive to germs or spores, and is of no other possible or conceivable use The use of carbolic acid should be confined to the disinfection of instruments, and for this purpose its strength should be rather more than 1 to 10 The solutions of 1 to 40 in common use are entirely inefficient and worthless The trifling quantities of carbolic acid added to all sorts of washes, ointments and prescriptions for internal and external use serve only to make the compounds disagreeable to use Increasing the volume of such solutions to any extent does not render them germicidal, but may cause dangerous toxic effects from their indiscriminate use No surgeon ought to suppose that he is rendering his instrument aseptic by dipping it momentarily in a 1 to 40 solution of carbolic acid The solution, he should know if he does not, should be 1 to 10, and the exposure to its action in no case less than ten minutes He must know that he cannot hope or expect to render an open abdominal cavity aseptic by the use of carbolic sprays or douching with faintly carbolized water, yet, if copiously applied, either the spray or solution may poison the patient fatally Whatever criticisms apply to the use of weak and inefficient solutions of carbolic acid for antiseptic purposes, apply with equal force to the use of mercuric chloride or other antiseptics If of less than germicidal strength there is no rational justification of their use, if of germicidal strength they are formidably dangerous We read constantly of the use of corrosive sublimate in solution of the strength of 1 to 2,000, or even 1 to 1,000, for the irrigation of large surgical wounds, or, for example, of the utero vaginal tract immediately after delivery It is not denied that toxic symptoms, and death with toxic symptoms, have followed such practice in the hands of very eminent practitioners Surely no eminence justifies a man in fatally poisoning his patients To one dead or the surviving friends it is all one whether death came from the hands of eminence or obscurity A solution of corrosive sublimate of the strength of gr ss–¼ f℥j cannot be safely employed to render aseptic any absorbing surface of considerable extent, a weaker solution, however copiously applied, while it may poison and kill the patient, cannot kill the spores nor prevent their development and reproduction as fast as the antiseptic is absorbed, flows away or is diluted and washed off by the secretion natural to the part Consider, also, the difficulty of applying a bichloride solution, for example, to every point in the entire utero-vaginal tract, plicated, creased, folded and obstructed with clots and secretions, as is the case shortly after delivery We could not be sure of reaching every point by injecting gallons of fluid If I could maintain, in the face of all obstacles, a solution of 1 to 1,000 mercuric chloride at the original strength in contact with every point of that vast mucous tract, I could render it certainly aseptic But what of the woman? Would she not be well nigh certainly poisoned? and would not criminal responsibility attach to me? It is within my power to know that my person and my instruments are aseptic or to make them so If I fail to do so and my patient dies as the result of my carelessness or ignorance, it is my fault

If I describe my own methods I shall be better understood I direct my efforts with scrupulous care to the disinfection of my instruments and person I boil my sponges in dilute muriatic acid and keep them for some hours in a 12 to 15 per cent solution of carbolic acid from which, just before using, I transfer them to boiling water which has been boiled for at least a half an hour My instruments lie covered in a similar solution for at least a half an hour, and at the moment of using them I transfer them to and pass them through boiling water I cleanse my hands and arms with Castile soap and aseptic water, and finish by rinsing them in a bichloride solution of 1 to 1,000 I wash the external parts about the seat of operation perfectly clean, and finish the sponging with the 1 to 1,000 bichloride solution

The operation done, I get the wound thoroughly clean with the aseptic sponges before closing it with aseptic sutures taken at the moment out of the carbolic solution and passed through the boiling water, again washing and cleansing the external parts perfectly, finishing by sponging with bichloride solution Lastly, I apply a pad of absorbent cotton covering the wound completely and making a complete septic screen, which I secure in place, if small, by court-plaster, if large, by bandages in addition, as may seem necessary I leave the primary dressing in place until I find some reason for removing it, often until the sutures are to be removed, and often then the

cotton is scarcely soiled or stained, and the wound healed by first intention If the carbolic and bichloride solutions are excepted the remaining method is the same I used as a military surgeon during the latter two thirds of the war and ever since I dressed all my wounds, surgical and others, with dry lint removed as infrequently as possible, and with infinite advantage over the cold water dressing then in vogue and all greasy and unctuous applications frequently renewed Now I know that I was using a perfect aseptic screen, for scientists and investigators use the cotton plug to secure the contents of their flasks and tubes from the access of atmospheric germs It prevents absolutely the access of germs to the aseptic preparations in the flasks and tubes, and it will and does keep them off the surface of wounds It is plain that every time an aseptic dressing is unnecessarily removed from an aseptic wound, it is a useless exposure to the danger of septic infection and an unnecessary disturbance of nature's reparative work

One thing more I deem of the utmost importance in the aseptic precautions necessary in surgical and obstetrical practice, is to limit the number of persons present to those positively necessary to render assistance No surgeon has a right to subject any person to operation in the presence of persons who may have come from questionable sanitary surroundings to the operating room, unless in cases of accident or emergency when the surroundings are not within his control As an *argumentum ad hominem* I put it interrogatively, has any surgeon a right to wear for merely ornamental purposes profuse locks of comely hair, or an immense shaggy, pendant beard? A man may, of course, carry this sort of precaution to whimsical and foolish extremes, but scarcely, if he is a man of sound scientific culture and natural good sense

I am not willing to close this paper without distinctly reaffirming my dissent from the opinion of those who hold that we may safely irrigate large absorbing surfaces with bichloride solutions of the strength of 1 to 2,000, or ¼ of a grain to the ounce It is, in my opinion, speaking as an experienced toxicologist, extremely hazardous to attempt to render the utero-vaginal tract after delivery aseptic by the use of so formidable a solution I have known deaths after such washings out with ominous symptoms, deaths which I firmly believe to have been caused by those washings out, and further, I believe there were no valid indications demanding or justifying resort to those washings-out Relying upon personal experience I believe that such proceedings are neither necessary nor useful if the lying in has been conducted in the light of modern science I have practiced medicine 27 years, and during a large part of that time have been extensively engaged in obstetric practice I have never washed out, and intend never to wash out the vagina of a recently delivered woman except with warm water for the removal of the débris of an embryotomy I have never left a woman from my first case to my last, inclusive, until every particle of soiled clothing was removed from the bed and person, the external genitals thoroughly cleansed and a clean napkin properly applied, and in the fact that I have never yet seen a case of septicæmia in my own practice I realize the justification of my practice

The best Listerian lecture I ever heard was delivered by the late Professor Charles D Meigs in 1859, when I was a student at the Jefferson Medical College It was on the conduct of a labor Preliminary to the lecture the janitor brought in a conspicuous array of soap, water, and clean towels Then followed the Professor, and he was received, as he always was, with hearty applause First bowing right and left in acknowledgment he pulled off his coat, removed his cuffs, rolled his shirt sleeves up and, soaping his hands and arms above the elbows, washed them, and then rinsed them in clean water, and finally dried them carefully and, taking a bottle of cologne, applied some of it freely to his hands Then turning to the class he said slowly "In the conduct of every labor the first essential thing demanded alike by safety and decency is to wash your hands Wash your hands first! Wash them clean! Wash them always, don't forget it How are you to tell, how am I to know that my servant who handles my reins hasn't got the gonorrhœa?" Many regarded all that as excessive mannerism and affectation It was the very best kind of teaching I have known and heard very many public teachers, some good, some bad, some indifferent, some very few great ones, the greatest of all was Professor Meigs That typical hand washing has been throughout my professional life a guiding star

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SOME OF THE CAUSES OF NON-SUPPURATIVE DISEASES OF THE MIDDLE EAR, AND SOME OF THE BEST METHODS OF REMOVING THEM

Read before the Chicago Medical Society, August, 1887

BY GEO W WEBSTER, M D,
OF CHICAGO

That the nose, throat and ears are closely related anatomically, physiologically and pathologically is a fact that needs no demonstration at my hands But, that most of the non suppurative inflammations of the middle ear originate in the diseases of the nasal and post-nasal region is as trite a fact, but not as generally recognized by most practitioners And even many aurists have yet to learn that the way to most successfully treat many of these non-suppurative diseases of the middle ear and the resulting loss of hearing, is by a thorough, skilful treatment of the diseases of the nose and throat I know of few other conditions, in this line of practice, in which the results of surgical interference and treatment are more apparent and gratifying to both physician and patient, notwithstanding the fact that a well known author, in a recent work on diseases of the ear, says that the time spent in making a rhinoscopic examination is time lost

If an excuse for this paper be needed, it is found in the fact, as I have just stated, that all authors do not agree with me in the above statements, and also

that their truth, together with the utility of proper treatment such as I shall attempt to point out, is not always recognized, and, especially in our public institutions, does not receive the attention merited by the importance of the subject If I am right in my statements, it behooves us to recognize all the causes, direct or indirect, exciting or predisposing, that we may be able to treat them intelligently and in accordance with the modern ideas of pathology, and also to remove those causes capable of removal

Some of the principal recognized causes of non suppurative disease of the middle ear are about as follows Hypertrophies, of whatever nature, including hypertrophies of the turbinated bodies, pharyngeal tonsil, faucial tonsils, hypertrophic rhinitis, adenoid vegetations of the vault of the pharynx, exostoses and deviated and deflected septum, polypi, fibroid growths or any condition of the nose or throat that prevents free nasal respiration, also measles, diphtheria, typhoid fever, scarlet fever, indigestion, pregnancy, improper clothing, wet feet, bad hygienic surroundings, in short, any or all conditions which tend to induce and maintain congestion and inflammation of mucous membranes

The first principle in treatment should be to lessen the congestion and inflammation, and where they have terminated in hypertrophies, remove them The consideration of all these causes and conditions, and the treatment of each, would be material sufficient for many papers, and I will therefore confine my remarks to some of the first mentioned causes, viz those which interfere with free nasal respiration, beginning with hypertrophy of the turbinated bodies

In this condition we may have either a hypertrophy of the anterior end, the middle, the posterior end, or a general thickening of the entire turbinated body, and oftentimes a thickened, hypertrophied condition of the mucous and submucous tissues lining the entire post-nasal space In diagnosticating these conditions it is, of course, essential that we have a good light, a large head mirror or reflector, tongue depressor, small throat mirrors, nasal speculum, a fair knowledge of the normal appearance of the parts to be examined, the requisite skill and patience to make the examination, and a reasonably tolerant patient

For a tongue depressor I much prefer the modified "Tuerck" instrument, as it has a metal core for strength, is covered with hard rubber and does not corrode, is easily cleansed, and the short handle allows the little finger to rest in the hook at the end, giving a firm hold and a better control of the patient's head I much prefer a small rhinoscopic mirror except in very tolerant patients with very roomy throats In a small percentage of cases a palate hook will be of service, and is best tolerated if it be flat and wide I notice, however, that the more skill I acquire in making examinations the less frequently I make use of the palate hook

Hypertrophic rhinitis causes deafness by the hypertrophy extending to the mouths of the Eustacnian tubes, causing a thickening of the lining of the same either at the orifice or entire length of the tube, this tending to prevent entrance of air to the middle ear, and the air becoming absorbed, we have then the atmospheric pressure on the external surface of the drum head, tinnitus aurium, vertigo, sometimes adhesive inflammation, anchylosis of the ossicles, and variable degrees of deafness Then again, hypertrophy may, and often does, interfere with nasal respiration, and cause deafness, as follows

With every inspiration and act of swallowing we have, as Lucae has shown, a tendency to create a vacuum in the post nasal space, with a consequent congestion which must sooner or later result in thickening and hypertrophy of the mouths of the tubes, and then all the other phenomena just pointed out, with, in many cases, a total loss of the hearing power

Again we have, as has been shown by Weber Leil, of Berlin, a paralysis or partial paralysis of the palato tubal muscles, and this also tends to prevent the entrance of air to the middle ear in the normal manner Just how this paralysis is caused is not quite clear to my mind This condition can be easily diagnosticated as follows Adjust the catheter and attempt to inflate in the usual manner, and air fails to enter the middle ear Then direct the patient to phonate or swallow At certain movements of the palato tubal muscles the air enters suddenly, and again we fail completely, although we know "the catheter is in the proper position in the mouth of the tube" This Weber Leil explains by saying that the muscles have suddenly dragged open the mouth of the tube, and then as suddenly allowed it to close again I find that in these and many other cases I can inflate easily by pouring 2 or 3 drops of chloroform in the bulb of the ordinary Politzer apparatus This bulb I have had made of metal, as the rubber is soon destroyed by the chloroform

Again, I believe that the sympathetic system plays an important part in all these cases of catarrhal inflammation by its action on the blood vessels, but just what or how I do not know

Having examined our patient and finding him deaf, and then finding hypertrophy of the turbinated bodies and nasal stenosis, it is of paramount importance that we first restore free nasal respiration And how can this be best and most easily accomplished? Some authors use either chromic acid, nitric acid or acetic acid, others use tents, dilators, etc , others the cold snare of Jarvis, and others again give preference to the galvano cautery in some of its various forms, and this is my preference for all cases of hypertrophy of the turbinated bodies, as I believe it possesses advantages over any and all other methods at our command

The acids cannot be as well limited in action or confined to the exact points requiring their action, and cannot be made, in many cases, to burn deeply enough without burning laterally as well, and thus destroying too much of the Schneiderian membrane, and we cannot judge of the depth of the burn nor stop it when it goes deep enough, although I do not deny that good results have been obtained in some cases by the use of acids

Tents and dilators are little used now, and deservedly so, as they are, when used alone, of little service The Jarvis snare is as difficult to apply as the hot snare, is as painful, and requires sometimes sev-

eral hours for the removal of a growth after it has been firmly grasped by the loop, and there is, even then, much liability to hæmorrhage

The galvano cautery is easily managed, is convenient, its action can be limited, the degree, depth and width of the burn controlled, it is no more painful than the cold snare, and does, in a few seconds, the work that takes an hour or two with the cold snare, and does not give the same liability to hæmorrhage

The first point which I wish to emphasize is that if the growth is large enough to require removal, it can usually be removed with comparative ease with the galvano cautery loop, and if it cannot be grasped by the loop without the aid of pins, etc , it is not large enough to require entire removal and can then be cauterized, preferably with some form of "moxa" electrode In those large growths having a peculiar cauliflower appearance, anything less than complete removal is of very little value If, then, we find that we have a growth large enough to require removal, we apply a 10 per cent solution of cocaine to the growth For this purpose I employ a syringe with a long fistula tip, and then a bit of cotton wound on the tip Then with the aid of the milled nut we can eject a drop at a time, and this can be readily and conveniently applied only where desired

Having the loop ready, it is passed carefully back and over the growth, when, if careful measurements have been made, the growth can be easily engaged in the loop However, if we fail, we can sometimes adjust it by the aid of the rhinoscopic mirror By directing the patient to depress the tongue with the depressor we can hold the mirror with the left while we adjust the loop with the right hand This procedure is not always necessary, as I have frequently removed these growths without ever having seen them until after their removal, and having judged of their presence by the symptoms In these cases do not tie the palate forward, as it is very unpleasant and quite painful to the patient, is of little or no advantage to the operator except in rare cases, and is a barbarous procedure

Having adjusted the loop, it can be rolled in on the windlass with the thumb while we close the circuit with the index finger, and in a few seconds the growth is removed, as it usually adheres to the loop as it is withdrawn from the nose Very little hæmorrhage is likely to follow

If the growth be too small to require entire removal, and is smooth in appearance, I use either the "moxa" or the pointed electrode This is thrust into or through the growth and then the current made, and we thus destroy the submucous and vascular tissue with as little loss of the membrane as possible

In a third class of cases there is symmetrical hypertrophy of the entire turbinated body In these cases I have obtained the best results by a narrow deep burn extending the entire length of the turbinated body, and almost or quite to the bone Sometimes more than one line of cautery is necessary By this method the cicatrix resulting anchors the membrane firmly to the bone and prevents its puffing up, and at the same time cuts or burns through the enlarged blood vessels and thus destroys them

Any of these operations, and especially the last, is followed by considerable reaction and inflammation for about 4 or 5 days

In some cases the anterior ends of the turbinated bodies are enlarged to such an extent as to require removal It can best be done with the galvano-cautery loop I always use the platinum wire for my loops

Perhaps a word about the after treatment of these cases may not be out of place Twice each day the parts are thoroughly cleansed by the patient, using for this a hand atomizer with a modified Dobell spray, always warmed to about the temperature of the body or warmer Every second day I see the patient and cleanse thoroughly with the spray and post nasal syringe, and then apply soothing applications of vaseline or some vapor with the inhaler When the more acute symptoms have disappeared I apply cocaine to one side, and then apply a mixture of equal parts of tr iodine comp and eucalyptol, or solution of nitrate of silver, to the entire post nasal space I also apply the iodine and eucalyptol to the turbinated bodies in the same way, as well as to the mouths of the tubes when they are thickened Then the ears are thoroughly inflated, and if the mouths of the tubes are much thickened, I have derived some benefit from the alterative action of the negative pole with the galvanic current, the electrode being placed in the mouth of the tube, and always using a milliampère meter to exactly measure the strength of the current

If there be paralysis of the palate tubal muscles, the Faradic current applied in the same manner is of advantage

1922 Indiana Ave

MEDICAL PROGRESS.

THE ACTION OF CERTAIN DRUGS ON THE CIRCULATION AND SECRETION OF THE KIDNEY —In the Section on Therapeutics of the IXth International Medical Congress, DR CHARLES D F PHILIPS, of London, read a paper on this subject It contained a number of very interesting experiments, made with Roy's onkometer, with caffein, spartein, strophanthin, digitalin and ulexin [1] He concluded that the flow of urine is not so much dependent on the blood-pressure as on the rate of flow of the blood in the renal vessels With regard to this point, it is necessary to remember that, although such drugs as strophanthin produce a great increase in the *force* of the cardiac beats, yet these are very much slowed, so that it is quite possible that although the heart's action is stronger, yet the total amount of blood sent through any given organ, such as the kidney, in a given time, may remain the same Whereas such a drug as digitalis, producing as it does a rise of blood-pressure and a contraction of the kidney-vessels, may cause an increased quantity of blood to pass through the renal vessels On this view one

[1] Ulexin is an alkaloid from the gorse, *Ulex europæus*

could find the explanation of digitalin being a diuretic, and strophanthin not being one

Inasmuch, however, as spartein has not so marked diuretic action, we must also assume that digitalin must have some peripheral action on the secretory apparatus of the kidney

His results were tabulated briefly as follows, in three divisions

A Drugs that first contract, and afterward dilate the kidney

1 *Caffein*—in small doses—induces in the stage of contraction a fall of blood pressure—in that of expansion, a slight rise During the former, the flow of urine *may* be arrested, during the latter it is always increased, such increase depending on dilatation of renal vessels

(The possible *arrest* of secretion during the first stage is special to caffein, and may be induced by large or repeated doses)

2 *Ulexin*—gr ½—greatly raises blood-pressure during the first stage (that of contraction), in the second, expansion is much greater in degree but shorter in duration than under caffein, and is accompanied by brief but marked increase in urinary flow, the effective dose is limited by its toxic action on respiratory centres Practically, *excess* of caffein induces only the first stage—*excess* of ulexin only the second

B Substances that dilate the kidney, but to less extent and more slowly than caffein and ulexin, are dextrose, urea, sodium chloride, and acetate, and probably all constituents of the urine

C Drugs that contract the kidney without subsequent expansion

1 Digitalin, with *increased* secretion of urine (probably resulting from general heightened blood-pressure)

2 Spartein, with *diminished* secretion (in health at least)

3 Strophanthin causes slight temporary contraction, with no marked increase of secretion

4 Apocynein, similar temporary contraction, and no definite increase of secretion

5 Turpentine, 6, adonidin, and 7, barium chloride give similar results

In conclusion, it seemed to him that the plethysmographic method of experimentation is a valuable one for determining the exact action of drugs on the circulation, and one that deserves more attention than it has hitherto attracted —*Medical Record*, Sept 10, 1887

NEW METHOD OF TREATING DISEASES OF THE SKIN LOCALLY —In the IXth International Medical Congress DR VALENTINE KNAGGS read a paper on this subject He proposed as a substitute for ointments the employment of emulsions which upon drying on the skin form protective films He had employed these dressings for the past two years with gratifying results in eczemas and other non-specific exudations The inunction of the body with fixed oils has been found of immense service, but they are not adhesive, and exuding fluids readily escape from the surface There are two methods of rendering oily substances adhesive 1 By adding to them resinous, gummy, or alkaline substances 2 In making use of gums to combine or emulsify a fat with water

Adhesive preparations, unlike oils, tend to arrest skin-action Thus tar, varnish, or collodion form an impervious covering Ointments to which adhesive substances are added diminish skin action, but do not abolish it

Well-made emulsions resemble milk or cream, are soluble in watery fluids, and are markedly adhesive, and are made by combining an ointment basis with water, a vegetable gum, and a suitable antiseptic

Thus the formula preferred would read

℞	Paraffine molle	℥j
	Pulv gum acac	gr 160
	Boracic acid	gr 16
	Aquæ	ad ℥ij

Stir until emulsified

Bismuth, zinc, sulphur, or other medicament may be added as desired Smeared over the skin, a film is formed, which is flexible and protective, and the antiseptics and medicaments have the best opportunity of exercising a beneficial influence

The author called especial attention to the fact that all lint and textile dressings could be dispensed with He did not expect these gum emulsions to displace older methods, but that they would serve a useful purpose

DR UNNA said that we were now in the period of transition, making our annual change of treatment It was very well for us as specialists to discuss new treatments, but we should not give them to the general practitioner until we were quite sure that they were good, and especially should not confuse him with new treatments until we were quite sure that they were new He had worked much with fixed dressings and varnishes, and some years ago had described such a varnish as had the reader of the paper He was glad to confirm the reader's claim regarding the utility of the emulsion dressing, but could not concede to him that it was new, as there are many other varnishes made with gums and fats He did not believe that any varnish which is soluble in water can prevent a great amount of evaporation from the skin —*Medical Record*, Sept 10, 1887

VAGINAL EXTIRPATION OF THE UTERUS AND OVARIOTOMY —A very interesting account of this double operation is furnished by DR ROBERT ASCH, Assistant Physician to the Breslau Clinic The operation was performed by Prof Fritsch The patient, a woman of 42 years, was found to be suffering from carcinoma of the cervix, the history of which extended over a period of 5 months A further examination revealed the presence of an abdominal tumor about as large as a man's head To render the diagnosis clearer the patient was anæsthetized and the tumor was found to be either an ovarian cyst or a subserous myoma It was decided to first extirpate the uterus and then remove the tumor by a laparotomy

Before beginning the operation the vagina was thoroughly douched with a sublimate solution 1 2000

The peritoneum being reached it was found that the tumor had no connection with the uterus but that it was a cyst of the parovarium, as evidenced by the discovery of the enlarged left ovary, which was in relation with the pedicle of the tumor The uterus was removed without especial difficulty and a provisional iodoform tampon introduced The laparotomy was next undertaken When the peritoneum was reached it was observed to bulge forward and when incised air escaped, which had evidently found entrance to the cavity through the vaginal opening After removing the cyst and closing the abdominal incision the pedicle was drawn down and stitched to the vaginal wall The operation lasted 1¾ hours, and upon its conclusion the temperature and pulse were found to be very satisfactory The patient progressed well and after 8 days the sutures were removed and primary union was found to have taken place The vaginal tampon was removed and the vagina syringed out with a 2 5 per cent carbolic solution On the day after the removal of the sutures the patient felt so well that in spite of frequent admonitions she sat up repeatedly and as a result the abdominal wound opened The assistant physician being sent for found the wound open through out its entire extent Fifteen knuckles of small intestine, together with the transverse color and a portion of the omentum had escaped These were returned to the peritoneal cavity After most careful cleansing the wound was closed by 12 deep and as many superficial sutures The patient had considerable fever at first but the temperature fell on the fourth day and did not again rise above normal The patient soon convalesced Throughout the entire management of the case the strictest antisepsis was enforced Alcoholic stimulants including beer are freely used in the Breslau Clinic, together with coffee —*Centralbl für Gynak*, No 27, 1887

Lithium Carbonate and Sodium Arseniate in Carbonic Acid Water in Diabetes —Martineau recommends the following preparation Into an apparatus such as is commonly used in Paris for extemporaneously making carbonic acid water, are put twenty centigrammes of lithium carbonate and a tablespoonful of a solution of twenty centigrammes of sodium arseniate in 500 grams of distilled water The quantity of carbonic acid water used is about one litre This quantity is to be drunk by the patient during each day, either by itself or mixed with ordinary wine at meals

The simplicity of this remedy led Dr Austin Flint to test its efficacy in certain cases of obstinate diabetes which he had under treatment The ten cases reported led Dr Flint to the following conclusions

1 In the three severe cases in which the solution of lithium carbonate and sodium arseniate in carbonic acid water were used, no very marked effects were observed in the few weeks during which the remedy was employed, but the treatment seems to be worthy of more extended trial, and it may be useful in mitigating the severity of a strict antidiabetic diet.

2 The so called specifics for diabetes have little if any effect An exception, however, may be made in favor of the arsenite of bromine, which has sometimes seemed to control, to a slight extent, the thirst, polyuria, and discharge of sugar

3 The main reliance in treatment is to be placed upon an antidiabetic diet This has fallen somewhat into disrepute because it is seldom efficiently carried out In no single instance, out of 99 recorded cases, did Dr Flint find that the antidiabetic diet had been enforced

4 Milk should be absolutely interdicted Its influence over the progress of the disease is prompt, powerful, and most injurious

5 There are certain cases in which dietetic treatment promptly arrests the disease and keeps it under control There are other cases in which treatment seems to be of little avail, except in possibly retarding the progress towards a fatal result Of the ten cases reported, and now under observation, seven are amenable to treatment and three are obstinate

6 A confirmed diabetic may be cured, in the sense that all symptoms will disappear, but the disease is liable to return at any time under an unrestricted diet Still, moderate care in diet will often secure immunity

7 A patient who has once had diabetes should have his urine examined every few weeks The glycosuria always precedes the general symptoms of the disease, and these general symptoms can generally be forestalled by proper treatment employed as soon as sugar makes its appearance in the urine

8 As the disease returns, either from imprudences in diet or from other causes, the successive recurrences present greater and greater difficulties in the way of treatment —*Therapeutic Gazette*, Aug , 1887

Urinary Fistulæ —J Hohlmann reports the results of 35 cases of urinary fistula operated on in the Breslau clinic for women In 27 of these cases the fistulæ were produced by pressure of the fœtal head in patients with contracted pelves In 2 cases the pelvis was normal, but hydrocephalus was present In 5 cases they were the result of obstetrical operations Two cases were caused by operations for vaginal myomata One was caused by a calculus

Constipation was observed as a very constant symptom, the writer believes by the intimate relations existing between the innervation of the sphincters of the rectum and bladder The voluntary attempt to prevent the discharge of the urine results in an involuntary impulse given to the sphincter ani Menstrual disturbances were frequently noticed Fistula was *not* observed to occur more frequently on the left side The formation of fistulæ was found to be favored by the simple flat form of the pelvis as well as by the flat form with narrowing of all the diameters

Preparatory treatment consisted in 2 or 3 sitz baths daily in a 2 per cent solution of carbolic acid, together with disinfecting vaginal douches given in the recumbent posture Dilatation by Bozeman's method was not adopted Excessive tension on the vaginal walls was relieved when necessary by counter inci-

sions Silkworm-gut and silk were used for suturing 29 cases recovered, 6 remained unhealed In one case in which the fistula involved the ureter and vagina nephrectomy was performed and the patient recovered —*Centralbl fur Gynakol*, No 33, 1887

THE REMOVAL OF SMALL OVARIAN TUMORS — KUSTNER, of Jena, contrasts the difficulties attending the removal of small ovarian tumors with those which accompany the operations for the larger ones

1 The opening of the peritoneum is more difficult because the walls are not stretched The linea alba is harder to find because the recti muscles are not separated The incising of the supra-peritoneal fatty tissues is easier when there is a large tumor beneath

2 In small tumors the small intestines nearly always escape when the peritoneum is opened, a difficulty which seldom occurs in the case of large tumors, and then, as a rule, only when adhesions are present The prolapsed intestines obstruct the incision, and reposition is often an extremely difficult and tedious matter The hyperæmia which takes place in the prolapsed intestines leads to dysentery

3 The small size of the incision increases the difficulties of all manipulations

4 The pedicles of the smaller tumors are shorter

In spite of these difficulties the writer counsels operation as soon as the tumor can be recognized, preferring to operate thus early rather than wait, as advised by Knowsley Thornton in 1884, until threatening symptoms appear or until the tumor has reached the level of the navel Another argument in favor of early operations is that benignant ovarian tumors may become malignant On the other hand, it is often very uncertain whether a small tumor may not be carcinomatous or sarcomatous —*Centralbl fur Gynakol*, No 27, 1887

COCAINE ANÆSTHESIA —WOLFLER says that local anæsthesia can be always produced by the injection *into*, not under, the skin of a 5 per cent solution of cocaine This is also true for the inflamed skin, though the injection should not be made, as in cases of panaritia, in the inflamed region, but in healthy skin, and the needle only carried to the inflamed region In neuralgic conditions Wolfler has had very different results, in sciatica relief is only temporary, and in trigeminal neuralgias none at all He has seldom seen symptoms of cocaine intoxication, and for this amyl nitrite is the antidote

SCHUSTLER reports about 80 cases of cocaine anæsthesia for operations on tumors, herniotomies, circumcision, disarticulation of toes and fingers, etc He uses a 10 per cent solution, and lays stress upon the point that the injection should not be made under but *into* the skin, which should be rendered as bloodless as possible He especially recommends cocaine in such short operations as evulsion of nails, slitting fissure of the anus, rectum, etc In urological operations he has had but few experiences in Dittel's clinic thus far In a case of amputation of the leg, cutting through the soft parts was painless, but lifting the periosteum and sawing the bone were very painful, though the limb had been rendered bloodless

FRANKEL says that cocaine has no reciprocal but only a local action, but that very weak solutions, 1 per cent, are sufficient, and should be injected in as many places as possible He has used it in tumor extirpations —*Centralbl fur Chirurgie*, No 20, 1887

VESICO-UTERINE FISTULA, NEW METHOD OF CYSTO PLASTY —FOLET recently reported to the Société de Chirurgie of Paris the following operation Under anæsthesia the urethra was dilated until the index finger could be introduced into the bladder and the fistula felt Then an assistant drew the uterus to the vulva by means of toothed forceps, the mucous membrane of the portio was cut around on the anterior wall, and now separated, in the same way as in the first act of vaginal extirpation of the uterus, the wall of the bladder from the uterus on the side of the fistula The finger in the bladder served to control the vesical wall during this part of the operation, and pressed it down to the vulva The fistula was now accessible, and was sutured with catgut, the uterus replaced, and the vagina tamponed with iodoform gauze Recovery followed promptly and without the slightest trouble

Folet believes that this procedure—drawing down the uterus and pushing the vesical wall into the vulva with the finger in the bladder—may be useful not only in utero vesical but also in high lying vesical fistulæ, in which the freshening and suturing is difficult

In the discussion Verneuil said that in most cases of cervico-vesical fistulæ we can freshen and suture *in situ* by lateral splitting of the cervical canal In this way a large number of these fistulæ have been healed —*Centralbl für Chirurgie*, No 24, 1887

THE DURABILITY OF SUBLIMATE SOLUTIONS — PROFESSOR VICTOR MEYER, of Gottingen, has recently examined a question raised by Angerer, of Munich, that sublimate solutions in ordinary water, undistilled, may be made permanent by adding to the water an amount of common salt equal to the weight of the corrosive sublimate Were this the case of course it would be a matter of great importance in military surgery and in emergencies Angerer prepared tablets of definite amounts of sublimate and salt, which seemed to form as durable and as antiseptic solutions as those prepared with distilled water At the request of Konig Meyer made a number of experiments, which are detailed in *Centralblatt fur Chirurgie*, No 24, 1887 He used solutions of 1 1,000, as Angerer directed These were made partly with distilled water, and others with ordinary water The solutions were kept more than a month The results of the experiments show that with the precipitate, there is no doubt that salt has any considerable preservative action on the solutions in open or loosely closed vessels

VOLKMANN'S ANTISEPTIC LIQUID is composed of thymol, 1 part, alcohol, 10 parts, glycerin, 20 parts, water, 100 parts It is a useful formula for antisepsis by thymol —*Deutsche-Amerikanische Apotheker-Zeitung*, June 15, 1887

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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BACTERIOLOGY AND ITS RELATION TO SCIENTIFIC PROGRESS IN MEDICINE

The admirable address of PROFESSOR SEMMOLA, of Naples, to the Ninth International Congress, September 7, 1887, aims *first* to remind us of the true method of advancing scientific medicine, *second*, to show the fallacies and unproved assumptions of the prevailing bacteriological doctrines, and *third*, to more clearly develop the fact, that a study of the conditions of the living system favorable for the reception and propagation of microorganisms is of equal, if not greater importance than the study of the individual microbes In regard to the first he says "We affirm, then, that the experimental method in medicine has for its purpose, the determination of the phenomena of nature and their causes The experimental method admits no individual dogmatic authority, nor has it anything in common with the theories of hypothetical methods The individual loses his personal authority in comparison with the teachings of demonstrated science " Again he says "The problem assigned to medicine is very simple, to determine the conditions of vital existence and its phenomena in healthy and diseased organisms," and he asks "Which are the phenomena that the physician studies? The answer is the functional disturbance or symptoms of sickness What are the physical and chemical conditions of these phenomena?—The natural causes of sickness " And in all our studies he urges with much earnestness the necessity of rigidly adhering to observed facts and more complete investigations, instead of using isolated facts as the basis of most important pathological and therapeutic deductions, and saying truly that, "isolated facts are an idle and dangerous luxury, and in medicine, the isolated and scattered riches cannot produce by themselves useful progress in clinical study "

Under the second head he attributes the fallacies or hasty assumptions of the bacteriologists, to a departure from the true and more complete experimental method of research to which we have just alluded Thus he says "For more than ten years microbiology instead of advancing with measured and secure steps, pretends to become, itself, pathology It was a true whirlwind, enveloping all, and, at the side of precious discoveries like that of the bacillus of anthrax, of tuberculosis, and some others which are an honor to science, came forth from every part microscopical researches on the existence of new microbes in all diseases, and every sickness seems to have its true germ, destined, perhaps, to die before being registered " And he adds "Pathology has come to be proclaimed almost the same as bacteriology" In relation to the third division of the address we have space only for the following brief quotations "I have shown how bacteriology has exceeded its proper limits, and I now desire to call your attention to its detrimental influence upon pathology The true part played by bacteria in pathology is the production by them of certain noxious and decomposed elements of the blood, which substances, and not the bacteria, are the potent factors in the causation of disease The treatment of the physical and chemical constitution and conditions of the blood is a much more fruitful field for study and investigation than a direct attack by germicides upon the bacteria The human body in health is a laboratory in which are constantly conducted chemical activities of the most complicated nature, and this is doubly true in disease The action of the pharmacopœia may be best explained by the effect of the medicinal agents upon the chemical composition of the elements of the body " Again he says "The great facts of clinical observation transmitted through centuries, are the precious basis of modern medical science It is the duty of the physician, at present, to apply to those great stores of knowledge the clear light of the chemistry and physics of the present, and thus to deduce rules of action for the investigation of new facts and new truths which arise in the clinical observations of to day In such a manner only can we hope worthily to contribute through an extended period of time, to the solid structure of truly scientific medicine "

THE PERILS OF CIVILIZATION

To say that the people of civilized countries are daily subjected to dangers that the savage knows not of is but to state what almost amounts to a truism It is equally evident that those who travel and those who live in cities are subjected to more perils, and oftener, than dwellers in the country It is true that the savage incurs dangers that but seldom or never threaten civilized people, and he has no means of combating them except by his own prudence, will or strength The chief dangers of civilization, however, are not always, or in the greater number of cases, to be avoided by prudence, skill or strength of any one man They may be compared to a large army, and must be met as such by an army

Of the numerous dangers to life and limb which are the accompaniments of civilization and improvements, the greatest danger is from the railway train This is a danger which has been reduced to a minimum in Europe, where railways are the property of the various governments, as a rule From the populous condition of the countries of Europe it has been possible to, in all cases, build railways with double tracks, without wooden trestles, never crossing a public highway or another railway on the same level, and with the roadways fenced in and furnished with numerous track-walkers Long distances and the sparsely settled condition of our country have rendered these things most inconvenient and in many cases impossible in this country Single tracks, grade crossings, wooden bridges, trestles and culverts, and heating by stoves, cause in this country not less than 4,500 or 5,000 deaths a year, and very probably the number of deaths is in excess of these figures To this must be added the fact that for each person killed at least five are injured, temporarily or permanently There can, therefore, be no wonder that the Section on Public and International Hygiene of the Ninth International Medical Congress adopted the following

WHEREAS, The whole community has been repeatedly shocked by the almost daily occurrence of terrible accidents on many of our railroads, causing considerable loss of life, and by habitual neglect of most elementary sanitary laws,

WHEREAS, As this Section considers itself in a degree the guardian of public health, be it

Resolved, That the attention of this Ninth International Medical Congress be respectfully called to this most important question, and it be requested to use its influence to obtain the necessary reforms

How can these accidents be prevented, and what part can medical men take towards their diminution and prevention? They can only be prevented or greatly diminished by the making and enforcement of laws in the several States, by which severe penalties may be inflicted on railway officers and employés for carelessness, and which will compel all railway companies to be more careful in the construction of their tracks, in all the particulars mentioned In Germany, when a person is injured or killed by a railway accident, some one is almost sure to suffer for it The value of human limbs and life is too much disregarded in America We have recently had an example of this in Illinois, in which more than one hundred people were crushed to death, and many more injured, in the most frightful accident in the history of railroads And what has been done to make railway officials more careful in the future? The men chiefly responsible for the accident, which was caused by, it may be said, wilful negligence, are free and unindicted, while the coroner and his jury, those mockeries of civilization and intelligent examination, have endeavored to cast the blame on a poor laboring man, not responsible for the accident Over and over again has it been the case that high railway officials have compelled railway employés to testify falsely concerning the causes of fatal accidents by threats of discharge Of the many railways centering in Chicago every one comes in on a level with the streets, some running for miles through the city In very many cases there are no gates at street crossings, and no watchmen

In a previous issue of THE JOURNAL we have spoken of the injuries in railway accidents in winter from fires caused by the stoves in common use, and from the objectionable and dangerous methods of heating railway cars, and we think it has been shown that these things can be easily obviated

There are many other causes of injuries in large cities especially City health officers, while engaged in hunting up cases of infectious and preventable diseases, and nuisances of filth, run a constant risk, especially in Chicago, of breaking a leg by stepping into a defect in a sidewalk, of losing an eye by a chip of stone from a stone-cutter's chisel, or by a cinder from a passing locomotive or tug boat, or having an eye removed by the rib of an umbrella in the hands of a careless woman Our heads are often endangered by workmen who fail to place sufficient scaffolding around a building in course of erection Employés in high dark buildings are in constant danger from dark stairways, open freight elevator shafts, and the lack of fire-escapes in case of fire "Buddensieck" buildings continue to be erected All these things will continue until the law makes negligence and carelessness a crime

Since the profession is interesting itself and the public more and more every year in regard to preventable diseases, let us extend our interest to preventable accidents Little, perhaps, can be accomplished in six months or a year, but in time the labor will be rewarded Much can undoubtedly be accomplished by earnest and persistent efforts on the part of boards of health, even though a few silly newspaper writers declaim against "the curtailment of our liberties" The liberty to maim and kill should be curtailed

A CURE OF CHRONIC RHEUMATISM

"Cure of a case of chronic rheumatism of thirty-six years' standing," says MR CHARLES MAY, in the *Lancet*, of August 27, 1887, sounds so like a sensational heading of an account of the marvelous effects of some patent medicine that one almost hesitates to enter on a subject having such a basis But Mr May records a case, and one which is certainly interesting Four years ago he was called to see a maiden lady, aged 60 years, who had discovered that her right nipple was deeply retracted, so as to be quite level with the surface In addition to the cancer of the nipple he found that the lady had suffered for many years with rheumatism, which all treatment had failed to relieve The history of the case was that thirty three years previous to his visit, during very hot summer weather the patient sat between the open door and a window while in a state of profuse perspiration A severe attack of acute rheumatism followed, from which it took her three months to recover It is not known whether there were any heart complications at the time, but at the time of the visit the sounds were normal The joints were very painful and swollen, which condition never entirely subsided A less violent but sharp attack came on eight years afterwards, and again four and two years before Mr May saw her The last was more confined to the lumbar region, and very severe "During the whole of the long period named she cannot remember having been entirely free from pain Going up and down stairs (especially the former) was attended with pain and difficulty, and could not be accomplished without the help of the baluster, the process being very slow, step by step Out door exercise, except for a short distance leaning on an attendant, was impracticable Any attempt to walk alone immediately produced giddiness and a staggering gait, and if not supported she would fall to the ground A sharp pain was frequently experienced at the top of the sternum, which increased on any attempt to swallow, causing a choking sensation, consequently all fluids were taken by sips" There was no history of gout or rheumatism in the family, but a sister died of cancer

Mr May does not give a minute account of the treatment, which extended over a considerable time, but merely gives a general statement of the medicines given, and the gradual progress up to recovery From a general view of the case, the invasion and long-continued possession of the system by the rheumatic virus and the mammary glandular disturbance, he was led to select medicines having a specific action on the parts, and a depurative action He therefore began with the iodide and bromide of potassium, gr v of each, in compound decoction of sarsaparilla and decoction of buchu and broom To this was added gr iij of extract of conium night and morning, in deference to its influence on chronic rheumatism and glandular enlargements This treatment was continued for one year, simarouba and aromatic spirits of ammonia being occasionally substituted for the potassium and conium At the end of the year the swelling at the joints had subsided, and the patient was relieved of the heretofore constant pain She could also move about the house without the assistance needed before, though not freely, but she still could not take out-door exercise without assistance, and the giddiness continued The iodide was now discontinued, and the bromide and conium omitted every other week for three months, and every third week for the next three months, and finishing the year with simarouba "At the end of this time she had regained fair powers of locomotion, and could move about the house freely, going up and down stairs without help, and could take a short walk without support, but did not feel confident without a companion Six months after this there was no vestige of rheumatism, joints natural, pain quite gone Even that in the chest, which had interfered with her swallowing fluids except by small sips, was no longer experienced, the power of swallowing being natural Sleep was continuous from soon after retiring until the time for rising, a contrast to the pain and restlessness of former times The general health is now excellent To use her own expression, she 'scarcely knows herself,' for whereas during the whole thirty odd years she does not remember having been free from pain, she is now entirely free from it, and whereas she had been unable to move about the house or go out without assistance, she can go out by herself, and has walked four miles without a rest On a recent occasion she was in the park, when, looking round to see that no curious eyes were watching her,

she said to a relative who was with her—'Don't laugh, I am going to run,' which she did"

The case recorded by Mr May must certainly be looked upon as very remarkable, and not the least remarkable points about it are, that a patient was found who would follow directions for so long a time in a case so apparently hopeless, and that the drugs given could be continued for so long a time without producing other than the desired effects Only twice was it necessary to discontinue the iodide on account of the catarrhal symptoms Conium was discontinued for a short time on three occasions, not from evidence of toxic action but because it was thought prudent to discontinue it The case further shows that if we would produce good results by drugs in such cases it must be by long and continuous administration

SUPRAVAGINAL AMPUTATION OF THE GRAVID UTERUS FOR MYOMATA

The first supravaginal amputation of the gravid uterus for myoma, on a basis of definite indications, was done by Kaltenbach on March 2, 1880 The case was that of a woman, 32 years old, who had aborted once An abdominal tumor was found which reached almost to the navel Later, when the tumor had reached the region of the stomach, the patient was examined under an anæsthetic, and was found to be in the 4th or 5th month of pregnancy Many small fibromata were found, and on the left side a fibrous tumor with a broad base, which was larger than the uterus Supravaginal amputation was performed with satisfactory results, the tumor weighing 3,350 grams, and showing on its interior several spots of softening According to Kaltenbach the operation has since been performed 9 times since then, with 3 fatal results His second case was that of a woman 33 years old, who had aborted once, there being a history of severe hæmorrhage extending over 4 years A fibromyoma as large as a child's head was found in the interior of the uterus Three years later the tumor had so increased as to render an operation necessary, and when removed the tumor was found to be as large as a gravid uterus at the 8th month The stump was treated *extra peritoneum*, and a 50 per cent solution of chloride of zinc used Softening of the interior of the tumor had taken place The patient made a good recovery

VOGEL has operated 11 times, and he contributes a paper on the subject in a recent number of the *Centralblatt fur Gynakologie* According to Kaltenbach and Vandrin the maternal mortality after this operation thus far is 50 per cent But in the 11 cases reported by Vogel the mortality was only 27 3 per cent The oldest method of treatment is that of inducing abortion or premature labor, with the idea of relieving the crowding of the abdominal viscera, and giving the tumor time for retrograde metamorphosis Vogel discards this method, however, on account of the dangers of hæmorrhage and infection The operative measures are myomotomy and supravaginal amputation By the first the woman is relieved of the tumor, and the child is given a chance for life This operation can be performed in cases of subserous and interstitial myomata by enucleation In cases of multiple myomata of the uterus attended with rapid growth or dangerous symptoms (threatening life) supravaginal amputation alone is to be considered

SOCIETY PROCEEDINGS.

CHICAGO GYNÆCOLOGICAL SOCIETY

Regular Meeting, Friday, April 15, 1887

THE PRESIDENT, CHAS WARRINGTON EARLE, M D, IN THE CHAIR

(*Concluded from page 444*)

ANTISEPSIS IN ABDOMINAL OPERATIONS, SYNOPSIS OF A SERIES OF BACTERIOLOGICAL STUDIES

The Preparation of the Sponges, Silk, Instruments, Gauze and Water—The sponges were those prepared by Schorse, of Milwaukee The silk was boiled an hour in a 5 per cent carbolic acid solution, and in some cases afterwards immersed in a solution of iodoform and ether and again sterilized by moist heat in a bottle stopped with cotton This was done by placing the bottle in a pail containing an inch of water and boiling for an hour The instruments were boiled an hour in a 5 per cent carbolic solution on the day before the operation and then dried On the morning of the operation they were again boiled for a few minutes in a similar solution and placed in trays of sterilized water for use

The water was sterilized by boiling in large tin cans, each holding 2 or 3 gallons, for an hour or more on three successive days The cans had tin covers, put on over a rim of cotton to stop the crack between itself and the can

The culture medium used for these investigations was sterilized, alkaline, peptonized beef tea gelatin Most bacteria will grow in this medium at the temperature of a living-room Answers have been sought through these investigations to the following questions

1—Are the sponges sterile when rinsed out and ready for use?—Pieces of each of the sponges to be used were cut off by the assistant who had the care

of them and put into the gelatin with sterilized forceps Three or four pieces were put in a single tube In this tube you see three such pieces surrounded and permeated by the transparent nutrient gelatin Out of twenty-five sponges from seven operations only a single sponge was found infected with a single colony Through attempted cultures from these prepared sponges and silk, answers to the following questions have been sought

2 —*Are the sponges sterile when ready for use?*—After the sponges had been rinsed out in sterilized water three times, the assistant cut off small pieces from each of the sponges to be used with scissors, and they were put in a tube of liquefied gelatin beef broth This tube contains three such pieces of sponge surrounded by the clear solid gelatins Out of twenty-five sponges from seven operations only a single sponge was found infected with a single colony

It appears that the sponges are sterile at the beginning of the operations and if sterile then of course aseptic Five or six pieces of silk were usually taken from as many needles, and an inch cut off from each and put in a single tube of gelatin More than thirty such pieces were examined from nine operations, and not a single colony developed In no case was the silk infected at the beginning of the operation

3 —*Is the catgut sterile? (Schorse's carbolized catgut)*—Several pieces at four operations were examined In one case only did any colonies develop In this tube you see two pieces of catgut at the bottom of the clear gelatin Clinging to the side of one piece you can discover a small spherical white colony, and a little distance from it in the gelatin another similar colony This catgut was from a new bottle of catgut used in operation 5, in a private house in the country It is difficult to say how significant their presence is They might arise from any one of the following causes

1 Imperfect primary sterilization of the catgut

2 Infection by floating germ or germs from the hands of the assistant when unwinding and cutting off pieces

3 Infection through transportation to and from the country

4 Imperfect sterilization of the nutrient medium

It is my own opinion that it is from infection through the second of the above named causes

Thus out of over thirty tubes containing over sixty pieces of material taken before the operations, only *two* pieces were found infected with *three* colonies This would indicate that the precautions taken are very successful at the beginning of the operation

4 —*Are sponges sterile after they have been used?*—At the end of each operation small pieces of each of the sponges used were cut of and placed in gelatin in the same manner as at the beginning They were usually stained with blood, and sometimes had pieces of the contents of the cysts clinging to them Thirty pieces from eight operations were thus examined In the tube which contains two pieces of sponge from the last operation, No 8, are numerous colonies on the side of the upper sponge They are spherical and whitish, and do not liquefy the gelatin The following is the list of the sponges infected

Operation 1, 5 sponges examined, 1 infected
Operation 2, 2 sponges examined, 1 infected
Operation 5, 4 sponges examined, 1 infected
Operation 8, 2 sponges examined, 1 infected

The sponges were generally sterile at the close of the operation, even though most of them had come in contact with the skin of the abdomen and the contents of the cysts

It may seem strange that the sponges used in operation 4, pyo salpinx, in which the cyst burst into the abdomen, in tearing it away from its adhesions, did not develop any colonies Five sponges were examined, and all remained apparently sterile From the pus in this cyst (cultures) were made in solid blood serum with the growth of a small micrococcus usually in the so called diplococcus form, but this microbe would not grow in gelatin beef tea

5 —*Is the silk sterile at the close of the operation and after it has been used as sutures?*—Out of twenty pieces of silk, often cut from the ends of abdominal sutures, only a single piece was infected with a single coccus form, viz one of the two pieces taken from operation 1 Over fifty pieces of material, after being used in operations, and only five pieces—four sponges and one piece of silk—were found infected It does seem, therefore, that the sponges and silk may be maintained sterile, so far as any germs that will grow in nutrient gelatin are concerned, even to the end of a long operation

In marked contrast to these results appear those from an operation performed by another operator who kindly allowed similar examinations The details of the preparations were given for publication The operating room was well washed with soap and water, both walls and floor It was in a new house which had never contained a sick person The sponges were part new and part old, having been used in a previous abdominal section After that operation they had been soaked a day in a strong solution of bicarbonate of soda, and washed out in a 5 per cent solution of carbolic acid and hung away in a bag On the day before the operation all the sponges were boiled in a porcelain kettle for more than an hour in a 2½ per cent solution of carbolic acid, and put into a jar and taken to the operating room The silk was boiled and carried in the same jar The operator took a bath and put on perfectly clean clothes on the morning of the operation The assistants were instructed to do the same The hands and arms of the assistants were washed in soap and water and then in a sublimate solution 1-1000

The material examined consisted of four sponges and two pieces of silk before the operation, after the sponges were rinsed out, and the needles threaded, and of two sponges after the operation and several inches of the thread used All the material was infected except one piece of silk examined at the beginning of the operation Every sponge had at least one colony of the hay bacillus, and one sponge after use showed more than fifty small white colors in the clear gelatin in the upper part of the tube

What influence the asepsis of the material has on the results of the operations as to death or recovery

is a question far beyond the scope of these investigations It would require a large statistical material of well observed cases, and more work than could be done by one observer But it may be safe to conclude that it is desirable to work through an abdominal operation with perfect asepsis everywhere, if such a thing is possible The above investigations have shown that such perfect asepsis can be attained Thus if we are ignorant of the extent of danger from non sterile material, we are hardly justified in trusting to the innocence or inocuousness of such an uncertainty, while we can have the asepsis of the material an absolute guaranty against the dangers of infection

Operations performed by Dr Christian Fenger

1 Dermoid of ovary Emergency Hospital, November 9, 1886 Bursting of cyst into the abdomen during operation, irrigation, 1 sponge and 1 piece of silk infected after operation, 4 tubes used to examine 12 pieces of material Recovery Development of properitoneal abscess, which was opened in the sixth week Complete recovery

2 Cysto-sarcoma of left ovary Emergency Hospital, November 30, 1886 Solid movable tumor 6 inches in diameter, only slightly adherent to abdominal organs, metastasis in peritoneum, some ascites present Drainage, 6 tubes used to examine 11 pieces of material, 1 sponge before use and 1 sponge after use infected, each with a single colony Recovery

3 Radical operation for hernia Emergency Hospital, January 18, 1887 Eight tubes used to examine silk and sponges and catgut, all sterile Recovery

4 Pyo-salpinx Emergency Hospital, January 19, 1887 The sac, adhering on all sides, ruptured in removal Irrigation of abdomen, 14 tubes of nutrient gelatin used, all sterile *Contents of cyst planted in solid human blood Serum developed diplococci of very small size, which do not grow in gelatin*, probably gonococci Death from acute sepsis within 48 hours

5 Double dermoid Private house, January 24, 1887 The tumor of the left side had ruptured 20 years before, and produced an almost fatal peritonitis (?) This tumor was now large and adherent all around The tumor on the right side was small and free, 9 tubes used with 25 pieces of material, 1 piece of catgut infected with 2 colonies, 1 sponge infected with a single colony Death from shock within 12 hours

6 Cyst of ovary Emergency Hospital, February 3, 1887 Seven tubes used to examine 10 pieces of material, all sterile Recovery

7 Cyst of ovary Emergency Hospital, March 22, 1887 Two tubes used to examine silk and sponges after operation only, all sterile Recovery

8 Malignant cyst of broad ligament County Hospital, March, 1887 Four tubes used, all sterile Death from uræmia on the fifth day Autopsy Atrophic and dilated kidneys

9 Proliferating cystoma of ovary Emergency Hospital, March 24, 1887 Large and adherent, burst during removal Irrigation of abdomen to remove cyst contents Drainage, 5 tubes used, 12 pieces of material, only 1 sponge infected with numerous colonies Death after 36 hours Autopsy after 6 hours Thrombosis of right ventricle Bloody serum found in the peritoneal cavity in small quantity was added to nutrient gelatin It remained sterile after 2 weeks' incubation

Contrasted case performed by another surgeon in which less successful antiseptic precautions were used

Cysto sarcoma of ovary Private house, February 22, 1887 Very large, and adherent to omentum and abdominal wall Drainage by means of 2 rubber drainage tubes, 9 tubes used for silk, and sponges all infected except one, containing silk, before the operation The sponges, after use, contained many 50–100 colonies Each of the 8 infected tubes had at least one colony of the hay bacillus Death on the third day No autopsy At each daily dressing there was evidence of some oozing from the drainage-tubes

DR CHARLES CALDWELL read a paper on

ENLARGED THYROID OR GOITRE, A CAUSE OF TRANSVERSE PRESENTATION

June 1, 1884, Mr G summoned me to attend his wife On the way to the house he informed me that she was in labor, that a midwife was in attendance and had been for 24 hours, that his wife did not seem to be making any headway, but was becoming weak and exhausted, and the midwife was frightened, not knowing what was the cause of the delay or what to do Her condition upon my entrance was truly frightful She was in the midst of a labor pain, pulling the midwife's hands, straining every muscle, her whole face cyanotic, and her eyes protruding as if they would escape from their sockets Exhausted she fell back, gasping for breath It required but a single glance to perceive that death threatened this poor woman from two sources, *i e*, asphyxia and rupture of the uterus Bimanual examination revealed the fœtus in a transverse presentation The os was fully dilated and the membranes had ruptured The mother had not felt the movements of the fœtus for several hours and its heart sounds could not be heard Podalic version was performed without delay, by Braxton-Hicks' method The feet were brought down, and during the next labor pain the second stage was completed The third stage consumed but a few minutes and the uterus contracted well The fœtus was large, but showed no signs of life The heart's action had probably ceased several hours before After visiting my patient for three succeeding days, during which time her pulse and temperature remained normal, I saw no more of her, but her husband, whom I met the following week, informed me that she got up the fourth day and attended to her usual household duties

October 16, 1885, I was called a second time to attend Mrs G in labor, and as in the first instance, she had called a midwife, also as before, she had been under her tender care, or rather at her tender mercy, for 24 hours Again the fœtus was in a transverse presentation with the right arm and prolapsed cord protruding from the vulvar orifice, for the membranes had ruptured The cord was pulseless The hand and arm were easily pushed up over the face

and above the brim of the pelvis By combined manipulation, with the right hand in the vagina and the left over the abdomen, cephalic version was performed The head was brought down into the first position and held there until by a strong labor pain it became engaged, when forceps were applied at the superior strait and the fœtus extracted during the next pain This fœtus was an unusually large one, and I regret it was never weighed Dr Jaggard, who utilized it for the cause of obstetric science, says it must have weighed nearly or quite 20 lbs Her puerperium was normal as before, which means she left her bed the fourth day

February 18, 1887, Mr G , for the third, and I hope the last time, summoned me and said his wife needed my services again that this time they had decided not to call a midwife first, but to send for me at once and give me a better opportunity to save the child's life Examination revealed a third case of transverse presentation Os was fully dilated, but membranes unruptured Through the membrane, by vagina, could be felt both the feet and hands The head was to the right and breech to the left Fœtus was in dorso posterior position The placenta could be easily felt through the abdominal walls, and was attached to the anterior wall of the uterus, near the fundus By external manipulation, I attempted to perform cephalic version before the membranes ruptured The amniotic fluid was small in quantity, and I failed Deciding upon podalic version, the membranes were ruptured, and a fœtus weighing 12 pounds was delivered in a few minutes, but not without considerable muscular exertion on the mother's part as well as on my own

As I brought down the feet with the right hand and pushed up the head with the left, the abdomen of the fœtus rotated anteriorly As soon as the body was delivered, I clasped the thorax of the fœtus with the left hand to prevent inspiration and asphyxia The arms were then brought down, and with the assistance of the nurse, who raised the child's body up over the mother's abdomen, I seized the fœtus by the occiput and delivered the after coming head without forceps The child gasped a few times, and then began to cry, to the delight of its mother Placenta was soon expelled and the uterus contracted firmly and well Puerperium as in the two preceding cases

This patient was born at Konigsburg, Germany, in 1852, was married in 1873, and is the mother of ten children The oldest four were born in Germany —the others in America during the last nine years Her first seven confinements were normal and she was attended by a midwife Seven years ago the left lobe of the thyroid gland began to enlarge during gestation, but caused neither pain nor dyspnœa Three years ago, during her eighth pregancy, the right lobe began to enlarge, and increased in size very rapidly, producing both pain and dypsnœa, compelling her to take a semi recumbent position at night instead of a horizontal one During the last three months of gestation she sat bolstered up in bed at night This posture, which she was obliged to take whenever she sat down, during the day as well as the night, produced a continued pressure on the fundus of the uterus, changing its long axis from a vertical to an oblique or transverse direction Of course, the long axis of the fœtus must coincide with that of the uterus, and the continued pressure on the breech or head, according to the end of the fœtal ovoid at the fundus, would force it into an oblique or transverse position, and also throw the lower end of the fœtus out of the pelvis and above its brim The same position of the mother is maintained during labor as during the last three months of pregnancy, hence the fœtus remains in the same oblique or transverse position, and the lower end of the fœtal ovoid cannot descend below the pelvic brim

It seems to me the above facts explain perfectly why the fœtus has been found in a transverse position, the three last confinements, and never at a previous one

In examining the obstetrical treatises at my command, I find no mention of enlarged thyroid as a cause of this presentation, but that it certainly is in this case I have not the least shadow of a doubt The causes usually given are Immature fœtus, contraction of pelvic brim, laxity of uterine muscles, excessive liquor amnii, twin pregnancies, etc , all of which can be excluded in this case The case has been quite interesting to me, for it is rare in my obstetric practice to meet with cases of transverse presentation, and I have *never* before seen it occur three times in succession in the same patient I saw my patient last week, and find by measurement of the tumor at the largest point, that it has diminished more than an inch in its circumference in seven weeks, and that she can now sleep in bed with two pillows under head Dyspnœa is not alarming until the seventh month of pregnancy, but fron that time until confinement it is excessive This is hardly the place to discuss what mode of procedure should be followed in her case for her relief, and yet, as she is but 35 years old, it is very probable that she may become pregnant again, and possibly lose her life, if nothing is done to remove or at least reduce the size of the tumor, until it shall cease to be a source of such alarming dyspnœa

I should be glad to hear the opinions of any of the Fellows who have had experience with this class of glandular tumors From my own experience I should not be in favor of total extirpation, for I once saw a woman cross the river before the operation was completed Ligation of the superior and inferior thyroid arteries, partial resection, injections or electrolysis seem to offer better results, and are certainly much less dangerous

Dr D T Nelson I have had one patient that this case reminds me of, in which not shoulder or other irregular presentation was the cause of difficult labor, but a high promontory (and it seems to me with the experience I have had with abnormal presentations that a high promontory is a very common cause of mal position), complicated by an enlarged thyroid, not to the extreme extent of the case reported, but such as to give the patient a great deal of inconvenience in the last months of pregnancy, and especially at the time of delivery I have delivered her with instruments several times The treat-

ment I have adopted in her case for the enlarged thyroid, and with seeming benefit, has been the free use of ergot in the intervals between pregnancies The gland will diminish greatly in size, at least in the intervals between pregnancies, as the pressure is taken off the circulation When she followed the treatment with some degree of faithfulness (she would not use the remedy with persistency), it seems to me that in two periods, when she did fairly well, continuing it for about two months, there was a more marked improvement than at any other time I would suggest this to the Doctor, as I know of nothing else that is more likely to serve him, before he decides upon a surgical operation In the acute enlargement of the thyroid, occurring in both sexes at puberty, though most frequently in the female, I have given ergot with excellent results, continuing it several months

DR C T PARKS I would suggest as to the treatment of this thyroid gland, that among the many methods I have seen adopted, the injection of a 5 per cent solution of carbolic acid sometimes brings about a very rapid improvement, and decrease of the enlarged gland An injection with a hypodermic syringe once or twice a week is not followed by any unpleasant reaction

SUFFOLK DISTRICT MEDICAL SOCIETY

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE

Stated Meeting, May 11, 1887

DR F L KNIGHT, CHAIRMAN

ALBERT N BLODGETT, M D, SECRETARY

DR F W STUART read a paper entitled

CAN CIRRHOSIS FOLLOW TRAUMA? A MEDICO-LEGAL QUESTION

October 3, 1885, during the service of Dr E O Otis, J B, aged 10 years, came to the Carney Hospital His family history was good He had always been well up to 1882, when he had an abscess on the left side of his neck which suppurated for two years, and resulted in contraction of the left side of the neck He had visited the Carney Hospital in June, 1885, when the following note was made "Patient listless, loss of appetite, diarrhœa three days, contraction of sterno-mastoid on the left side due to an old abscess, tenderness over the site of the old gland and in the region of the pneumogastric" The patient complained only of swelling of his abdomen He was very irritable, and cried so much that it was impossible to make a careful physical examination, though it was evident that there was fluid in the peritoneal cavity, fluctuation being well marked He was given syrup ferri iodidi, and told to return the next day for a careful examination The patient returned Monday, October 5, Drs E O Otis, W H Devine and myself being present We were now told that on the previous Tuesday the patient had been kicked by a schoolmate, and that the disease dated from the day of the assault A careful history was now taken, and a thorough physical examination made The patient's mother stated that he had always been well up to the time of the assault, with the exception of the abscess and the attack of indigestion mentioned before She said that he was nervous and irritable, but attributed this to the fact that the boys of his age were constantly irritating him on account of his wry neck Otherwise he was a strong, healthy and cheerful boy On Tuesday, September 29, while playing in the street he became involved in a disturbance with a schoolmate, and, though an exact story of the quarrel could not be obtained, it was established that the patient had been knocked down, and while lying on his back had been stamped upon, the heel of the assailant striking him in the abdomen The patient spat up some blood, walked into his house not far away, complained some of pain, but the next day was able to attend school On the Saturday following, his mother first noticed that his abdomen was swollen, and brought him to the hospital

Physical examination showed the patient to be well developed for a boy 10 years old, but he was decidedly pale and cachectic in appearance His temperature was normal, and his pulse and respiration were but little hurried Heart and lungs were normal His abdomen was much enlarged and fluctuating On percussion there was dulness everywhere, with some areas of flatness, and the percussion note was unaffected by a change in the patient's position The urine was high colored, specific gravity 1021, albumen ⅛ per cent, and the sediment contained some renal epitheleum, urates and a few casts The existence of an exudation, was of course, very evident, and a diagnosis of chronic peritonitis was easily made, but at the same time it was felt that there must be something underlying the peritonitis In attempting to diagnosticate the disease more accurately, some differences of opinion were developed, though it was considered to be very probable that the case was one of tubercular peritonitis The absence of any tubercular trouble in any of his relatives, as well as the absence of any pulmonary signs in the patient tended to negative this view

In a few days the distension became more marked, the genitals were very œdematous, and the breathing became embarrassed On October 16, the abdomen was aspirated, and about two quarts of a clear serous fluid were drawn off, it being impossible to aspirate more than a small part of the exudation, owing to its being sacculated At the same time the genitals were punctured with a needle and the fluid allowed to trickle away During this time the patient bled very frequently from his gums Under symptomatic treatment the effusion largely disappeared, and the patient was able to attend school again This improved condition lasted for some time, after which the fluid began to reaccumulate, and a scrotal hernia was developed on the left side

Again there was improvement, and in May, 1886, the patient returned to the hospital to see if something could not be done for his neck Examination

at that time showed still evidences of the exudation, and the borders of the liver and of the spleen were undeterminable

July 3, the boy who assaulted our patient was tried in the police court on the charge of having committed a felonious assault, and I was the only medical witness summoned The facts were testified to as stated above, though the testimony also unintentionally drew out the information that the patient had for months been subject to bleeding from his mouth I was asked whether in my opinion the kick received caused the patient's disease I answered that I thought that the injury did not cause the existing trouble in the sense of starting it up, *de novo*, though I admitted that possibly it might have hastened a previously existing disease

My conclusion was based on the following considerations It did not seem to me that the injury had started up an acute peritonitis, because the patient was not very sick, that is, he had not been confined to his bed, he had no marked fever, and had not complained much of pain Furthermore, it seemed to me that so large an effusion thrown out in four days would have perceptibly embarrassed his respiration and quickened his pulse Therefore it seemed to me that the assault merely served to call attention to a previously existing condition, which it at most had aggravated

The question then asked was Could the hernia be due to a weakening of the abdominal walls at the point of the injury induced by the kick? I thought not, and attributed the hernia to simple distension of the abdomen by the fluid

Finally, I was asked if the spitting up of blood was not proof that the kick had caused some internal injury I answered decidedly, no The patient may have received a blow on the mouth, may have bitten his tongue in falling, and in any event this symptom could have but little weight in determining the force of a blow in one who so often before had "bleeding from his mouth" The defendant was, however, bound over to the Superior Court, and a hearing before the grand jury resulted in the finding of a true bill

July 25, Dr Devine was called to see the patient, and afterwards Dr Otis saw the case with him The patient then had great distension of the abdomen and general œdema Tapping was advised, but not consented to by the parents

August 4, the patient complained of great pain in his abdomen, his pulse was rapid, temperature high, and the general constitutional disturbance great Dr Devine, who was then attending the patient, attributed these symptoms to an acute exacerbation of the peritonitis The patient died August 6, and an autopsy was made by Dr F W Draper, Medical Examiner, at 2 45 P M of the same day Drs Devine and myself being witnesses Dr Draper has very kindly sent me the notes of the case, which were as follows

Autopsy by Dr F W Draper, Medical Examiner, at 2 45 P M, August 6, 1886 Body very pale, a little livid discoloration of dependent parts Rigor mortis absent No appearances of decomposition

General anasarca—œdema of face, arms, hands, thorax, abdomen, genitals, legs and feet Abdomen distended with fluid, fluctuation well marked Scrotum large and red At the left inguinal ring, there was an opening sufficiently large to admit the index finger easily

Internal Examination —The peritoneal cavity contained 172 fluid ounces of clean, thin, serous fluid The heart was normal The lungs were œdematous and injected in their lower and posterior portions The spleen was enlarged to four times its normal volume, it was softened and its section presented limited areas of diffuse hæmorrhage infiltration The kidneys were moderately enlarged, pale, with normal relations between the cortical and medullary portions, their capsules were free The liver was reduced to the size of a man's fist, it was of very dense consistency, light yellow color, with thick interstitial partitions between the lobules, and a great number of small nodules upon its surface The intestines and apposing surfaces of the abdominal organs were firmly adherent at numerous points by strong bands representing a former inflammation of the peritoneum, and layers of soft lymph at various situations indicated more recent peritonitis The peritoneum was thickened and opaque There was no purulent exudation The peritoneum and mesentery were œdematous, and the dependent parts of the intestinal folds showed limited patches of hæmorrhagic infiltration The stomach and intestines presented nothing remarkable upon internal examination The mesenteric glands were normal The brain was soft and œdematous

Diagnosis —Chronic interstitial hepatitis, chronic hyperplasia of the spleen, chronic adhesive peritonitis, ascitis and general anasarca

Cirrhosis of the liver is so rare a disease in childhood that many of the books specially devoted to children's diseases make no mention of it Still, in a very hasty review of the literature on the subject, limited to the usual reference books, I find quite a number of recorded cases

F Weber[1] and Virchow[2] report congenital cases, Wettergreen[3] reports a case at four, Cayley[4] and West each one at six, Loeschner[5] one at seven, Hauerwas[6] and Wilks[6] each one at eight, Murchison,[4] Frenche[7] and Griffith[4] each one at ten, Maggianni[8] one at eleven, Steffen[8] two cases, one eleven the other thirteen, and Wunderlich[8] observed two cases in sisters, aged eleven and twelve years respectively None of these are recent cases, since I did not have time to consult the recent journals

It is generally admitted that the excessive use of alcohol is the usual cause of cirrhosis, but various others have been given Flint mentions syphilis, chronic malarial poisoning, chronic phosphorus poisoning, chronic peritonitis, and occlusion of the bile duct as causes to which cirrhosis is often assigned,

[1] Ziemssen s Encyclopædia
[2] Archiv fur Path Anat Band xxii S 426
[3] Quoted by London Medical Record, 1881 p 117
[4] Trans London Path Society vol 27 1876
[5] St. Partholomew s Reports 1887
[6] Guy s Hospital Reports 1875
[7] Quoted by Pepper
[8] Quoted by Niemeyer

though he would doubt the efficiency of them The excessive use of condiments and extension of a perihepatitis have also been charged with producing cirrhosis, while Griffith in the report of his case, alluded to chronic abscess as if it were a recognized cause of this disease Of the cases cited, Wunderlich, Murchison and West (the latter a patient, a girl of 8, being in the habit of drinking a half pint of gin daily) were able to prove that their patients had used alcohol to excess Wettergreen and West attributed their cases to the excessive use of coffee The writings of Virchow and the reports of the Italian physicians would lead one to believe that syphilis and chronic malarial poisoning may cause cirrhosis, but in the main one is almost forced to look upon this disease as a specific disease with its specific cause—alcohol The reader has notes of a case of cirrhosis seen in Professor Bamberger's ward in Vienna The patient, a girl 11 years old, gave a history of intermittent fever, and to this her disease was attributed But long after she had been admitted to the hospital it was ascertained that her father kept a "Brantwein-Geschäft," thus making it, after all, more than probable that her trouble was due to alcohol, since in the family of such a man brandy was likely to be looked upon as a panacea for all our ills It must, however, be admitted that careful questioning fails to establish an alcoholic habit

What caused the cirrhosis of the liver in our patient? Did the trauma cause it? There was no history of the abuse of alcohol, there was no question of syphilis, since parents, and brothers and sisters were all healthy and free from any signs of this disease, and the patient had never had intermittent fever If the injury caused the disease, it first started up a chronic peritonitis, and secondarily to this came the cirrhosis That such a thing is possible has been suggested, but I think it hardly probable, and in this case I feel that in June, 1885, when the patient was listless, etc , and a diagnosis of indigestion was made, he had beginning cirrhosis

This would coincide with the opinion arrived at from his physical condition when I first saw him, that his disease dated back weeks at least According to Griffith, the chronic abscess may have caused it, but I failed to see the report of any case tending to support such a view In conclusion, let me say that I believe it wiser to admit our ignorance of the cause involved in a case so puzzling, as this, than to refer it to so hypothetical a cause—as a chronic abscess

DR A N BLODGETT said that the insidious character of the disease in the present case, its great gravity, and its fatal termination forcibly reminded him of a case seen at a distance from Boston, in which a somewhat similar and equally unusual course of phenomena were noticed The patient was a literary gentleman, well known to many members of this Society, who while in the enjoyment of his ordinary good health, was surprised to find that he was becoming weak, and particularly that he was troubled by shortness of breath on making any exertion, sometimes experiencing almost the condition of asphyxia After a time he sought medical advice, but was able to give absolutely no satisfactory history of the character of his disease Physical examination revealed the fact that the left side of the thorax was the seat of an extensive pleuritic effusion, the liquid reaching to the level of the sixth rib in the nipple line Twenty-four hours later, the fluid had increased to such a degree, that there was constant oppression in breathing, and the level had risen to the fifth rib in the axillary line The case was diagnosticated according to the rational and physical signs, as acute pleurisy, but was considered peculiar from the entire absence of any of the ordinary symptoms of this disease The case passed into the hands of a very distinguished practitioner, who treated the patient by the constant exhibition of alkalies, and frequent and abundant catharsis, without, however, any attempt to relieve the distension of the pleura by aspiration or puncture, and the patient rapidly sank, and died at the end of four days The autopsy showed the conditions diagnosticated during life to have been correct

DR HAROLD WILLIAMS asked if the autopsy of Dr Stuart's case showed any signs of the chronic abscess from which the boy had suffered some years before?

DR STUART said that there was no internal evidence of any lesion referable to the abscess, no trace of which was found Griffith, however, mentions this as one of the causes of cirrhotic disease of the liver

DR WILLIAMS remarked that in answer to the question "Was the injury the cause of the cirrhosis?" it was conceivable to suppose that the kick might have been the cause of the chronic peritonitis and that the adhesions resulting therefrom might have acted as a cause of the cirrhosis by constricting the blood vessels of the liver Dr Williams asked if the adhesions noticed in this case were found to cause such interference

DR STUART replied that this was not the case That it had been discussed at the autopsy, but that while many adhesions were found, none were in such position as to warrant such a conclusion

(To be concluded)

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, May 4, 1887

THE PRESIDENT, JOS TABER JOHNSON, M D, IN THE CHAIR

(Concluded from page 442)

DR M G ELLZEY read a paper entitled

ANTISEPTICS IN MEDICINE AND SURGERY

(See page 459)

DR A F A KING was very much interested in the subject and had accepted the opinions of the great surgeons As Dr Ellzey had antagonized these beliefs, he (Dr K) would like to know if Dr Ellzey could prove his statements by demonstrations or experiments

DR ELLZEY had not formed his opinions from experiments, but from tables showing the value of the

different antiseptics, and the opinions of eminent chemists and such operators as Keith, Pasteur, Stern berg and others He had not experimented with the different germicides because he had not the facilities

DR KING was not familiar with the results of experiments All lecturers on surgery recommend the 1–40 and 1–20 solutions of carbolic acid, but Dr Ellzey informs us that nothing less than 1–10 solution has germicidal powers Why have not surgeons adopted this strength? Dr Ellzey says that it is impossible to wash the vagina clean with douches We may leave a million microbes, but do we not do some good if we wash out several millions? It may be true that some persons are susceptible to mercuric or carbolic acid poisoning, but that is no reason for abandoning them until we can find something better He agrees with Dr Ellzey in the value of high temperatures as nature's germicide, another proof of his theory of fever being a conservative process for the cure of disease

DR J FORD THOMPSON said this was the fist time that he had ever heard Dr Ellzey on antiseptics, but some time ago he read an article of the doctor's on the same subject in which he took the same ground He agrees with Dr Ellzey in the efficacy of covering the wound with cotton, but he thinks the germs would be kept out better if the cotton was medicated He had recently seen an article by Bantock upon antiseptic surgery, and this system was his rule of practice He was surprised to find that Bantock states that antiseptic surgery has had its day, the practice being so common as to be almost universal Bantock, Keith and Tait are specialists, and their work is almost entirely confined to the abdominal cavity, which, in his opinion, is the least adapted to antiseptics Nor did he believe in weak solutions, which he thought simply lulled our suspicions to rest without being germicidal However, he did not consider the question settled He uses the bichloride solution of strengths varying from 1–1,000 to 1–10,000 There are certain situations on the body to which antiseptics cannot be properly applied, as, for instance, the eye, ear, nose and mouth In these places, after a surgical operation, he considers it impossible to apply a strictly antiseptic dressing He does not believe with the enthusiasts that when antiseptics are used there will be no suppuration A certain amount of suppuration is an almost necessary concomitant of the reparative process and is innocuous

He believes in the prevention of the entrance of bacteria into the wound by an antiseptic dressing Putrescence is what we aim to prevent, and the antiseptic dressing is intended to shut out the germ of it That antisepsis is the greatest God send to surgery has been proved in every amphitheatre In his practice he does not depend wholly upon antiseptic solutions, but uses them as aids Every surgeon has a routine practice which is of more or less consequence to success True, the parts may be washed with turpentine, ether, soap, etc , but that is not antisepsis, as is usually understood Everything about the wound must be aseptic and as far as possible antiseptic—especially the dressings

The dressing is the weak point in Dr Ellzey's theory He substitutes aseptic cotton for aseptic and antiseptic dressings Guérin introduced this into field and hospital practice, but it is not now used Let the doctor take cheese cloth, boil it in soda, wash it and then let it soak in the mercuric solution for weeks Is not this superior to non medicated wool? Many things may be weeded out of antiseptic surgery, but the principle of antisepsis will remain the same, and never be abandoned The incision in the abdominal wall is an ordinary incised wound and will heal without extra dressing, as that class of wounds will in any other situation

DR T C SMITH asked Dr Thompson if the abdominal cavity, the eye, the mouth, etc , were not fields for testing the value of antiseptic surgery, what were?

DR THOMPSON replied that it was impracticable to test it on those special regions It must be applied to surgery in general

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FOREIGN CORRESPONDENCE

LETTER FROM PARIS

(FROM OUR OWN CORRESPONDENT)

Treatment of Fractures by Massage—Propagation of Typhoid Fever through the Air—Urobilinuria—A New Caustic Paste

At a recent meeting of the Société de Chirurgie of Paris, Dr Lucas Championnière read a report of two cases of fracture treated by massage The one is relative to a fracture of the internal ankle, the other to a fracture of the lower third of the tibia without displacement In the latter case, the patient was able to walk at the end of 25 days To these two cases Dr Championnière adds a third, the report of which he obtained from Dr Lostrine, a surgeon, relative to a fracture of the lower third of both the bones of the leg The patient was completely able to walk on the thirty-fifth day From these cases, Dr Championnière suggests that massage acts here not only in making supple the joints in the neighborhood of the fractures, but also, contrary to what might have been supposed, it favors the formation of the callus, and the explanation offered is that this result proceeds from the massage effecting the resorption of the effused products which interfere with the formation of the callus According to Dr Championnière's experience, it is only the first séance that is painful, but the patient soon gets accustomed to the massage and feels great benefit from it During the operation pressure should be made in the neighborhood of the fracture, but not on the fracture Dr Berger observed that the patient of Dr Championnière who walked on the thirty fifth day after a fracture of the leg, proves nothing in favor of the superiority of this method, as similar results are frequently obtained by the old procedures of treatment Moreover, Dr Berger understands that the method may be serviceable for fractures of the articular extremities of bones, in which there is no great danger

of false joint, but for diaphysitic fractures he understands the utility of massage less, as in such cases one should always fear the formation of false joints Dr Marc Sée stated that he obtained the same results as Dr Lucas Championnière by means of the elastic band He considers this as being a great deal more simple, and, in any case, it never requires the sittings of massage of one hour and a half, which would constitute a serious obstacle to the introduction of this method in practice

Dr Féréol lately read a paper at the Société Médicale des Hôpitaux, in which the author, Dr Devalz, of Eaux Bonnes, intended to show that typhoid fever may be propagated through the air as well as by the fluid or solid substances introduced into the stomach The following illustrative case is given by the author A lady arrived at Eaux Bonnes from Paris with the primary symptoms of typhoid fever, of which she was cured at the end of four weeks Three daughters of the proprietor of the hotel in which the lady was staying, who occupied a room adjoining the privy in which the dejections of the patient were thrown, successively fell ill with the malady The author thinks that he has a right to conclude from this circumstance that in this case, at least, the disease was communicated through the air which circulated freely between the privy and the room occupied by the patients, every precaution having been taken to prevent contamination of the food or drinking-water

At the same meeting Professor Hayem read a very interesting article giving the results of his researches on urobilinuria The author demonstrated how, by the aid of the spectroscope, urobiline may be recognized in the serum of the blood and in the urine In the second part of his work, Professor Hayem devotes some considerations to clinical results According to him, the excretion of an abnormal quantity of urobiline constitutes urobilinuria This phenomenon may be transitory, or it may be intermittent, or it may present itself in a permanent manner When the affection is slight, the color of the urine is scarcely altered, but when well marked, we have the hemapheic urine of Gubler Urobiline is found in the urine, either alone, or associated with a more or less considerable quantity of biliary pigments It is found constantly during the periods of asystolic cardiac affections It is frequently met with in intoxications, diseases of the liver, cerebral affections, and in certain chronic maladies It is also frequently met with in the greater part of acute affections Dr Hayem does not believe that urobiline alone can produce jaundice Finally he had been able to establish, in all the cases in which he observed urobilinuria, a venous stasis of the liver with slight catarrh of the biliary ducts, and with infiltration or fatty degeneration of the hepatic cells In the third part of his paper, Dr Hayem studied the origin of urobiline For the learned Professor, the diseased liver, instead of secreting normal pigments, secretes urobiline, which, according to certain clinical facts, would pass directly from the biliary canalicules into the blood In conclusion, Dr Hayem establishes the prognostic value of the symptom of urobilinuria as follows When temporary it indicates temporary modifications of the hepatic circulation When permanent, it indicates infiltration or the fatty degeneration of the hepatic cells

The powerfully modifying action of caustics has always been considered a precious resource in surgical practice According to the *Courrier Medical* Dr Jules Felix, of Brussels, finding a great number of inconveniences attending the ordinary caustics in use, proposes a paste as a substitute for them The following is the formula of the paste Powdered starch 37 grams, wheat flour 112 grams, bichloride of mercury 1 gram, dried chloride of zinc 110 grams, pure iodol 10 grams, croton chloral 10 grams, bromide of camphor 10 grams, crystallized carbolic acid 10 grams, all to be mixed up in a glass mortar, the ingredients being well pulverized separately, and gradually add to the whole the quantity of distilled water necessary to obtain a homogeneous paste, which keeps in a perfect state of preservation for an indefinite time When required to be used the quantity necessary should be pressed in the hand previously moistened, and the paste could then be pressed into any shape or form The author claims the following advantages for this preparation 1 Pain very supportable and slightly intense, without any general reaction 2 Production of an eschar which is hard and well limited, detaching itself quickly or allowing itself to be easily removed with a sharp instrument or by scraping 3 Marked modifying and antiseptic action 4 Powerful hæmostatic 5 Easy to be manipulated and put into any form according to circumstances 6 This caustic not being fusible, nor deliquescent, may be easily applied to any part, where it may remain more or less long time (from 6 to 24 hours), according to the intensity of action the surgeon may wish to obtain 7 The eschars fall off in a few days, by the application of glycerine with or without carbolic acid A B

DOMESTIC CORRESPONDENCE

SALIVARY FISTULA

In June, 1885, I excised a sebaceous tumor which had been located mostly in the space bounded by the angle of the jaw in front, and the lobe of the ear above The tumor had lain partly over the parotid gland in front of the lobe of the ear I had expected to be able easily to lift the tumor out of its bed after making a free incision, but I found it very tightly bound down and intimately connected by areolar tissue—with the surrounding tissues—making a careful dissection necessary to dislodge it The operation was very bloody and my assistance was indifferent, but the tumor was ultimately dislodged The wound seemed to be healing kindly until one day my patient informed me that at times a gush of fluid flowed from what was a small remnant of the wound I became aware that I had a salivary fistula to contend with I must have wounded the parotid gland with the scalpel in dissecting out the tumor and in removing what was simply a deformity, I had substituted an affliction which

was an active nuisance far more troublesome than the original deformity

Examination showed the existence of a fistulous channel with a diameter of about three sixteenths of an inch, and from this channel the saliva flowed freely whenever food or any sapid substance was taken into the mouth My patient's complaint was temperate though mildly reproachful, and he was solicitous for relief from this new affliction

I kept my patient's mind occupied for a time, in what I knew to be useless efforts to heal the sinus until I might think out an efficient scheme After carefully looking over the methods of Ericson and Bryant I concluded that the use of the cautery in their cases was irrational—and also that the nature of the salivary sinus such as my case afforded data to—which might be fitted a rational method of cure

The healing of a salivary fistula is prevented by the intermittent flow of saliva—which bathes the walls of the sinus, and prevents union When an acute inflammation occurs, in the parenchyma of a gland, the cells affected by this inflammation cease to form their particular secretion until the inflammation becomes resolved Therefore to heal a salivary fistula, it is necessary to induce an acute inflammation in the secreting cells of the gland, and at the same time an adhesive inflammation of the walls of the sinus, that obliteration of the sinus by adhesion may be effected before the cells of the gland resume their proper function—by the abatement of the inflammation affecting them The actual cautery induces such an inflammation as is needed, both in the cells of the gland and in the walls of the sinus, but it does more, it kills what tissue it touches and before union can occur the sloughs must come away, and by this time, the function of the secreting cells is reestablished and the same state of affairs exists as before the use of the cautery

In my case, I filled the sinus completely with fly-blister, and let it remain several hours After removing the fly blister, the sinus was pulled together with adhesive straps This resulted in a partial union of the sinus I next painted the sinus to its bottom with cantharidal collodion and again pulled it together with adhesive straps, and the result was a complete union of the walls of the sinus, and permanent cure of the difficulty, as two years have now elapsed and the channel has not re opened

These remarks apply of course only to such cases as are not complicated with obstructions in the duct proper of the gland and to cases only of traumatism directly to the gland itself

Silverton, Colo , July 16, 1887 J W BROWN, M D

INTUBATION

Dear Sir —I have devised the following improvement on the O'Dwyer intubation set, which entirely obviates the difficulty of properly adjusting the extractor

An eye should be drilled in the anterior or stationary jaw of extractor, about its centre, and from the inner opening a groove cut to the tip of jaw sufficient to accommodate the double thread coming from the tube The thread hole in tube should be drilled about 1 inch from neck of tube, having its external opening countersunk to receive knot on thread Both ends of thread should emerge from upper opening of tube, the obturator being grooved for their reception Now by introducing the free ends of thread into the eye of extractor, the extractor is threaded into the tube with facility and precision

For the application of nitrate silver solutions I suggest the following To one end of a small glass tube attach the bulb of a medicine dropper, to the other a camel's hair pencil, the quill of which is made pervious, or a piece of sponge or cotton may be made to answer for the brush end A U shaped bend should be made near the bulb With this the solution may be applied in any quantity without danger of the disagreeable dripping so common with an ordinary brush Respectfully,

W V MORGAN, M D

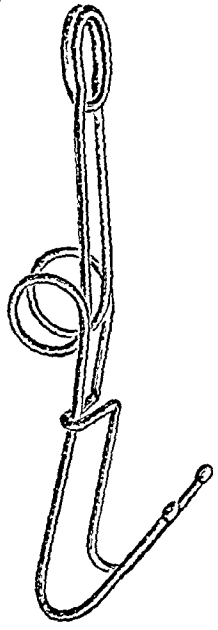
Indianapolis, May 12, 1887

NEW INSTRUMENTS

IMPROVED NASAL SPECULUM

BY I W FINK, M D

HILLSBORO ILL



Necessity is said to be the mother of invention, therefore appears the accompanying cut, representing an instrument brought into existence by me for the examination of the nasal passage—a Nasal Speculum Like many other instruments intended for the same purpose, it has its good qualities as well as its faults

If it is worthy of merit, it is worthy of publication, and the medical profession is entitled to its use

NECROLOGY

J W D OSGOOD, M D

Jonathan Walter Dandola Osgood, M D , of Greenfield, Mass , was born in Gardner July 29, 1802 He was the son of Rev Jonathan Osgood, M D —a graduate of Yale, and for many years the only minister and physician of his town—and Orange Wadsworth, of Farmington, Conn The subject of this notice was graduated at Dartmouth College in 1823

He studied medicine in Philadelphia and Dartmouth, taking his medical degree in 1826 He opened an office in Providence, R I, but remained there only a few months, beginning his practice in Templeton, Mass, in 1827 In 1858 he removed to Greenfield, Mass, where he died May 15, 1885

The son of a man who stood high, both as a clergyman and a physician, Dr Osgood naturally had a deep sense of the dignity of his profession He entered it not for gain nor for a livelihood merely, but as a sphere of beneficent service, alleviating the ills and promoting the welfare of his fellow men, and therefore entitled to the best energies at his command Accordingly he was always an earnest student in both the theory and practice of medicine He entered actively into medical societies being a member of the Worcester District Medical Society, of the Massachusetts Medical Society—of which he was once Vice-President—and also of the American Medical Association since 1853, and pretty constant in his attendance He kept up with the literature of his profession, even in his old age For the acquainting of himself with all lines of progress in his work he frequently visited the hospitals of New York and other large cities As a consequence he was fresh and living in his knowledge, and growing skilful as a practitioner He not only had a large practice in his own community, but was also in wide demand for counsel elsewhere He excelled in diagnosis and was a good surgeon, ever ready in expedients at times of emergency His gifts were exercised in a spirit of such genuine interest in his patients, with such gentleness and faithfulness, that he made himself the trusted and beloved friend, and almost a member, of every family that he served

In his relations to the members of his profession he was the soul of honor, regarding scrupulously their rights, observing with delicacy professional proprieties, and always commanding the respect and confidence of his associates Outside of his profession he had business interests but no business activities, only taking pains to be connected with men whom he could implicitly trust, that he might give his entire attention to the duties of his chosen calling Beyond his profession he read widely, having an intelligent interest in science, biography, and especially history At the time of his birth his father was evidently a reader of history, and had become an admirer of the celebrated *Doge of Venice, Enrico* Dandolo, of illustrious patrician family, who bore glorious part in the Latin conquest of Constantinople, which so changed the face of Europe It was this admiration of a character distinguished in history that conferred upon the subject of this sketch his third name

Dr Osgood was exceedingly happy in the formation and development of his domestic relations, but through the vicissitudes of a long life he was called to drink deep of the cup of domestic sorrow In 1834 he married Eliza, the daughter of General Lewis Barnard, of Worcester, Mass She died in 1835, leaving a son, Walter Barnard In 1838 he married Mima Florella, daughter of Dr James Stone, of Phillipston, Mass Of this marriage there were born three children, James Stone, Eliza Florella, and Caroline Phebe In 1868, after thirty years of domestic felicity, Dr Osgood was called upon to part from the wife who had shared largely in creating as well as enjoying his general prosperity Four years later his older son, Walter Barnard, on whom he had come to lean with confidence and pride, was taken from him Seven years elapsing, in 1879, his younger daughter, to whom he was tenderly devoted, after a protracted and distressing illness, passed from his sight As Dr Osgood had accepted his prosperity with wise soberness, so he endured his afflictions with Christian fortitude One great blessing was accorded unto him to the end, of which he often spoke with devout thankfulness It was the affectionate devotion, the intelligent sympathy, the always adequate helpfulness of the daughter that survives him

Dr Osgood was true to the faith of his Christian parentage He was not a church member, for the creeds with which he was acquainted perplexed him, but he freely avowed his faith in the Lord Jesus Christ as his saviour His last illness was very distressing, the autopsy revealing ossification of the coronary passages of the heart, but his mind was clear and his interest in the important affairs of the time was unabated His bible was a constant companion He was frequently in prayer He endured his sufferings with resignation, and met death with Christian composure S H L

MISCELLANEOUS.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM SEPTEMBER 24, 1887, TO SEPTEMBER 30, 1887

Lt Col A K Smith, Surgeon, granted leave of absence for one month and fourteen days, to take effect upon his being relieved from duty at U S Military Academy S O 223, A G O, September 24, 1887

Capt R W Johnson, Asst Surgeon, granted leave of absence for twenty one days, to be taken advantage of so that he will return to his station at latest by the middle of October, 1887 S O 204, Div Atlantic, September 23, 1887

First Lieut W D Dietz, Asst Surgeon, leave of absence extended one month S O 223, A G O, September 24, 1887

First Lieut Wm L Knudler, Asst Surgeon, ordered to accompany Light Battery "F" Fourth Artillery, from Ft Snelling, Minn, to the International Military Encampment at Chicago, Ill S O 97, Dept Dak, September 20, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING OCTOBER 1 1887

Asst Surgeon V C B Means, ordered for examination preliminary to promotion

P A Surgeon E Z Derr, detached from Navy Yard, New York, and to the "Nipsic"

P A Surgeon Richard Ashbridge, detached from Naval Academy, Annapolis, Md, and wait orders

P A Surgeon A H Russell, ordered to the Naval Academy, Annapolis, Md

P A Surgeon C G Herndon, detached from Naval Dispensary, Washington, D C, and to the 'Enterprise"

P A Surgeon Geo Arthur, detached from the Museum of Hygiene, Washington, D C, and to the Naval Dispensary

P A Surgeon S H Griffiths, ordered to the Museum of Hygiene, Washington, D C

Medical Inspector J C Spear, leave of absence granted until July 1, 1888, with permission to leave the United States

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ORIGINAL ARTICLES

ABSTRACT OF A PRELIMINARY REPORT OF EXPERIMENTAL RESEARCHES CONCERNING THE INFECTIOUS NATURE OF TRAUMATIC TETANUS

Read in the Section of Pathology of the Ninth International Medical Congress, September 6, 1887

BY EDWARD O SHAKESPEARE, A M, M D,

OF PHILADELPHIA

PATHOLOGIST TO THE PHILADELPHIA HOSPITAL, ETC

The author reported in detail a long series of experiments which are still in progress, and announced the results already obtained Upwards of fifty inoculations have already been made Two methods of inoculation have been employed—intra cranial inoculations after the method of Pasteur in the case of rabies, and subcutaneous or inter-muscular injections by means of hypodermic syringes The inoculations and injections were made with aseptic precautions, and with sterilized instruments In none of the experiments was there any sign of accidental infection, such as suppuration, etc The material used for inoculation was in general obtained from the medulla or the spinal cord, and by culture in neutral or slightly alkaline flesh glycerine agar as recommended by Roux for the culture of tubercle bacilli The tetanus material was taken, under aseptic precautions, from a horse and a mule dead of traumatic tetanus in the Veterinary Department of the University of Pennsylvania, the brain, medulla and cord being removed one and three hours respectively post mortem and immediately kept on ice until used The inoculation material was in general prepared in the following manner A small piece of the medulla or cord was thoroughly rubbed up in sterilized distilled water, after the solid particles were allowed for a few minutes to subside to the bottom of the vessel, the opalescent emulsion thus obtained was drawn off by means of sterilized pipettes, and placed in small sterilized vials until used, never having been thus kept longer than three hours before inoculation Eight control experiments were made, and none of these rabbits became ill The author concludes his paper as follows

Resume of results

First Series—Eight rabbits were inoculated sub dura cerebri from the medulla of a horse dead of tetanus, between August 1 and 18 inclusive The rabbit inoculated directly from this horse showed the first symptoms of tetanus within 15 hours and died of well marked tetanus within 48 hours after inoculation Both the period of incubation and that of death became markedly shortened in continuing the inoculations from rabbit to rabbit

Second Series—Four rabbits were inoculated sub dura cerebri from the same medulla of horse The rabbit inoculated directly from the horse showed the first symptoms of tetanus within 20 hours, and died within 48 hours after inoculation Continuing the inoculation from rabbit to rabbit, the period of incubation and of death became markedly shortened

Third Series—Four rabbits were inoculated sub dura cerebri from the same medulla of horse after it had been kept on ice a day longer The rabbit inoculated directly from the horse showed the first symptoms of tetanus within 24 hours and died within 48 hours after inoculation Continuing the inoculations from rabbit to rabbit, the period of incubation and of death became markedly shortened

Fourth Series—Three rabbits were inoculated sub dura cerebri from the medulla of a mule dead of tetanus, with the same results as in the preceding series

Fifth Series—Seven rabbits were inoculated under the skin and into the muscular tissue of the back, from the medulla of the horse above mentioned One died within 18 hours and another died within 10 days, but neither of them showed any signs of tetanus A rabbit inoculated sub dura cerebri from the medulla of the latter on August 15, is still living and well on September 4, date of the last observation

Sixth Series—A rabbit, which had been inoculated under the skin directly from the horse on August 1 was 8 days afterward inoculated sub dura cerebri from the medulla of the last rabbit of the third series It became sick and died promptly of tetanus within the shortened period, a rabbit inoculated sub dura cerebri from its medulla, showed signs of tetanus within 20 hours, but did not die until 5 days after inoculation

Seventh Series—Six rabbits were inoculated sub-dura cerebri from emulsions of spinal cords of rabbits, which had died of tetanus within the shortened period above mentioned These cords had been treated in a manner similar to that employed by Pasteur for the attenuation of the virus of hydrophobia, during periods varying from 3 to 15 days Five of them died of marked tetanus, the symptoms appearing and death occurring within periods longer than those of the corresponding rabbits from which the

medulla had been taken, and usually proportional to the length of time the cord had been drying. One of the six showed doubtful symptoms, but nevertheless very promptly died

Eighth Series —A rabbit was inoculated sub dura cerebri from the medulla of a rabbit which had died after inoculation from the cord which had been 15 days drying It showed the first signs of tetanus in 40 hours and it died of tetanus 7 days after inoculation A rabbit was inoculated sub dura cerebri from the cord which had been drying 14 days, and it died of tetanus in 20 hours A rabbit and a cow were inoculated sub dura cerebri from its medulla The former quickly died of marked tetanus The latter died within 2 days without marked symptoms, and from the autopsy it seemed probable that injury to the brain had been the cause of death (there had been great difficulty in performing the operation of inoculation) A young rabbit inoculated sub dura cerebri from this cow's medulla died within 10 hours, but showed no signs of tetanus, and another rabbit inoculated sub dura cerebri from the medulla of this rabbit August 27, is still living and quite well September 4, never having shown any signs of illness

Ninth Series —Three rabbits were inoculated sub-dura cerebri September 1, from spinal cords of tetanus which had been drying respectively 23, 27 and 28 days (these cords were the same as those which had been drying longest, mentioned in the preceding seventh series) The rabbits inoculated from the 23 and 28 day cords showed no signs of illness up to the time of the last observation, September 4 The one inoculated with the 27 day cord for the first time showed stiff jaws and difficulty in eating on the afternoon of September 4

Tenth Series —Three rabbits which had been inoculated under the skin on August 18, and had remained perfectly well, were inoculated sub dura cerebri September 1, from the same cords mentioned in the ninth series The rabbit inoculated with the 23 day cord was found dead the next day, but it showed no signs of tetanus either externally or at the autopsy That of the 28 day cord showed stiff jaws and would not eat for the first time on the afternoon of September 4 That of the 27 day cord showed no signs of illness up to the last observation, September 4

Eleventh Series —Three rabbits were inoculated sub dura cerebri, August 31, from cultures started from the horse's brain August 1, and renewed once, viz , on August 20 One of them has remained quite well up to the last observation, September 4 One remained quite well until September 2, afternoon, when it showed intermittent trismus and indisposition to eat This condition continued up to date of last observation, September 4 One showed slight signs of tetanus for the first time September 3, and had them also up to date of last observation, September 4

Twelfth Series —A trial attempt was kindly made for me by Dr L Wolf, Demonstrator of Medical Chemistry in the Jefferson Medical College, to isolate a ptomaine from the brain, medulla and cord of the mule and cow above mentioned The Stass-Otto method was more or less closely followed

The product obtained from the mule was injected under the skin of the back of two rabbits They became very ill within 20 minutes, being slightly paralyzed and exceedingly restless, frequently getting down flat on the belly and up again and jerking the hind legs up, but they showed no marked convulsive movement or trismus They entirely recovered within 6 hours

The product obtained from the cow produced but little and only very transient and indefinite effects

Note —Several autopsies of the tetanic animals were made, and they invariably showed intense congestion of the lungs, trachea and kidneys Sometimes there was congestion, oftentimes none at all, of the central cerebro spinal nervous system The mucous membrane of the stomach was apparently normal

Conclusions drawn from the author's personal researches

1 Traumatic tetanus of the horse and mule is, at least sometimes if not always, an infectious disease, transmitable to other animals and therefore possibly also to man, and during the progress of this disease a virus is elaborated and multiplied which is capable of producing the same infectious disease in some other animals when placed beneath the dura mater of the cerebrum

2 This virus is contained in the medulla and spinal marrow of the animal suffering with the disease It is like the virus of hydrophobia, capable of being strengthened in virulency by inoculation sub dura cerebri from rabbit to rabbit, and, like the virus of hydrophobia, is capable of attenuation by exposure for a sufficient time to the action of dry air at a temperature of Summer heat and, still again like the rabic virus, its effects are far more intense when the virus is inserted beneath the dura mater cerebri than when injected beneath the skin or between the muscles of the back

3 The author reserves his conclusion concerning a prophylactic effect of inoculation of the attenuated virus, until the completion of experiments which are at present in progress

Conclusions drawn from the author's experience which correlated with those of Nicolayer, Carle and Ratone, Rosenbach, Ferrari, Flugge, Hochsinger, et al

Traumatic tetanus of the lower animals and of men, at least sometimes, possibly always, is a specific infectious disease due to the action of a specific infectious virus which exists in the tissues at the seat of infection, in the blood and in the central cerebro-spinal nervous system

In view of the experimental evidence which we possess at present and of numerous unassailable observations of many surgeons and veterinarians, there seems to be ample warrant for the admission that not infrequently tetanus in man is acquired directly and indirectly from some of the domestic animals which surround him, notably the horse

INFANT FEEDING, ESPECIALLY WITH REFERENCE TO SUBJECTS WITH INFANTILE ECZEMA

Read in the Section on Diseases of Children, at the Thirty Eighth Annual Meeting of the American Medical Association June, 1887

BY L DUNCAN BULKLEY, A M , M D ,
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In the following simple and practical paper I do not intend or expect to present any very new or startling points in regard to the subject under consideration, nor have I any special food to advocate, and not even any single fixed method of feeding to propose or defend I confess myself to be still a searcher after the best nourishment for, or rather after the best method of nourishing, the growing child, and especially one afflicted with infantile eczema I have studied the subject many years, in hundreds or even thousands of cases, but believe that much may yet be learned, and that we by no means appreciate the greatness of the subject sufficiently, and feel certain that the majority of practitioners do not give it the attention it deserves, while I am perfectly sure that the laity are by no means aware of the importance of proper feeding, nor rightly acquainted with the principles involved Certain am I, from experience, that the right principles are often most egregiously violated, even by those of more than ordinary intelligence, while among the poor the ignorance and neglect of the matter is often appalling

The present paper grew out of a discussion bearing upon "Infant Feeding" in the Children's Section of this Association at its meeting at New Orleans, two years ago, when, by vote of the Section, the writer was asked to prepare and present a paper on the subject.

In attempting to fulfil this request I shall not tax your time and patience with any scientific study of the processes of digestion, nor shall I attempt any discussion of the various foods which are more or less favorably known, neither shall I enter the literature of the subject The object of the paper is rather to introduce the topic for discussion, and to present the practical aspect of the case as it has developed itself in my observation clinically

If we look in the text books, either on Diseases of the Skin or on Diseases of Children, we find but little reference to the matter of diet in children with eczema, and only the most general directions given Indeed, one of the best writers on Diseases of Children, Eustace Smith, says "Too much importance, however, need not be attached to the subject of diet in the treatment of eczema " Now, while all agree that *too* much importance must not be attached to the element of diet, in the management of infantile eczema, experience has shown me most conclusively that in by far the larger share of cases far *too little* consideration is given to the subject, and that judicious directions in regard to the matter have not only aided greatly in curing a present attack, but have also sufficed to prevent its recurrence

Much that will be said in connection with this subject is undoubtedly well known to my hearers, indeed, much of it is no doubt self-evident to an intelligent observer, but I feel it necessary to treat the subject fully and plainly, because, however intelligent parents and nurses may be in other matters, it seems impossible for them, ofttimes, to exercise the slightest common sense or judgment when it comes to the matter of what shall enter the infant's mouth Much that will be said in regard to those affected with eczema applies equally well to infants with other diseases, or, indeed, to those in supposed health, but is none the less necessary and important in the present connection

I find that it is almost useless to simply direct the attendants on infants that the diet shall be plain and nutritious, or to say that the diet must be restricted, or that the infant requires more nourishing food In the majority of cases this really means nothing, either on account of the ignorance or carelessness of the mother or nurse, often they may desire most earnestly to aid the physician, but, having no knowledge of the physiological processes of digestion, or of the relative value of foods, or indeed, of the end to be accomplished, and being generally guided by the advice of the persons with whom they come in contact, nurses and others, it often results that they are about as far from right as it is possible to be, unless particularly instructed by the medical attendant

In dealing with a case, therefore, it is necessary to give both negative and positive instructions, to define clearly both what and how the child shall *not* eat and drink, and how the feeding shall be carried on—in many cases the former is even more important than the latter

I do not wish to offend my audience by the very simple and homely matters presented, but I have seen, both among the poor and even among those in the higher walks of life, such gross errors in regard to either what was given to children or what they were allowed to have, that I cannot forbear mentioning some of the articles in this connection I have seen even very young infants with candy, even of the worst kinds, cakes of all varieties, cheese, apples, oranges, bananas and other fruits Recently a babe 6 months old, covered with eczema, was brought to me, biting lustily on and having eaten half of an orange, devouring the skin and all Once I found a pickle in an infant's hand, while it is most common to see crackers, even of the most indigestible varieties, given to infants, "just to keep them still," as the mother will say Careful inquiry will elicit the fact in a considerable proportion of cases of infantile eczema, that the little patients get more or less tea and coffee, the attendant often saying that the infant is exceedingly fond of tea, while occasionally have I found that they were also given beer

It is not at all uncommon, in going carefully over the history of infants with eczema, to find that the patient is accustomed, even during the first year of its life, often when but a few months old, to take some of the food of adults, eating, as the mother will say, a taste of everything on the table, and when closely questioned it will sometimes be found that this may include even pies, and the most indigestible articles So commonly have I found this to be the case that I now always investigate the matter, and

frequently I have refused to treat the patient unless a promise is given that the child shall not come into the room while the food of the family is on the table

While these gross errors in infant feeding are, of course, much more common among the poorer and more ignorant classes seen in dispensaries and hospitals, they also occur in the better classes, even in those where it would be least expected, as I have observed time and again And even at the risk of being thought unnecessarily minute and perhaps commonplace in my treatment of the subject, I must emphasize the fact that, for the thoroughly successful management of infants with eczema, the diet must be most carefully investigated and watched, so that the physician shall be sure that the little patient takes only the articles directed

It would hardly seem necessary to mention such a matter as regularity of feeding But unless this is attended to errors may occur, and I have frequently seen infants where too frequent nursing seemed to be an element in keeping up the digestive disorder which was at the bottom of the eczema, the child is too often given the breast each time it cries on account of the itching of the eruption, and thus the disease aids in perpetuating itself I have also often seen bread, if not a more harmful article, given for the same purpose Efficient local treatment which allays the irritation may, therefore, have more than a purely local action, when it allows the infant to sleep without the constant application to the breast

Having now made certain that the infant will receive nothing but the nourishment intended, it is necessary for the physician to give particular and specific directions in regard to this latter, and often to inquire most carefully into the matter, in order that there may be a perfect understanding in regard to every detail of nourishment

Even when the infant is nursing there may often be some necessity of care and attention As already mentioned, the breast should not be given too often, nor too seldom, nor at irregular intervals The child may also undoubtedly be affected by the condition of the mother, and by what she eats and drinks Often a case of eczema will be benefited by improving the health of the mother in many respects, for frequently eczema is dependent upon poor nourment, and the anæmic, dyspeptic, constipated mother cannot furnish perfect milk I almost always give a bitter tonic with acetate of potassium to a nursing mother with an eczematous child, and am very careful in regard to the condition of the mother's bowels Other mothers need iron, hypophosphites, malt, or cod liver oil, while very frequently it is necessary to give careful attention to the diet of the mother

Many nursing mothers are in the habit of taking large quantities of tea, others take beer, or chocolate, with the idea of aiding in the secretion of milk All of these I believe to be more or less injurious to the nursing infant with eczema, and are forbidden If properly taken, milk affords the best means from which the human milk can be secreted, and there are few who cannot take it with benefit, both to themselves and their nursing infants, if due care be exercised in its administration

The first point which I emphasize is that the milk should never be taken at the meals, nor in connection with any other substance whatever, nor when the stomach contains any food, or remains of food It is best taken pure and alone, as a drink, and preferably at the temperature of the body, never iced, when the stomach is empty, presumably about three hours after a light meal, and four hours or more after a more hearty meal Thus, my constant direction is that nursing mothers should take milk, say about an hour before each meal, and then also during the night if awake, beginning not earlier than about 11 o'clock A quart or two of milk can thus be taken with comparative ease, and its effects appear in the mother and child often in a very striking manner If the milk seems to sour at all on the stomach I frequently have a few drops of liquor potassæ, 10 or 15, or a little bicarbonate of soda, added to each tumblerful

The idea of giving the milk thus on an empty stomach is that it may enter the system, if possible, without passing through the process of curdling and digesting in the stomach When given during the interval and after stomach digestion is finished, the supposition is that the alkaline milk, received into the stomach when this is slightly alkaline, as it is at this time, enters the absorbents at once and mingles with the blood current, as we know it can when injected into a vein It is to be remembered that under the microscope milk globules and those of chyle are hardly distinguishable, and as the blood current is alkaline there is no reason why milk taken in this manner, and entering the lacteals undigested, may not mingle at once with the mass of blood, as does the chyle and as does also the milk when administered in transfusion The addition of an alkali renders this more easy and certain, and when the stomach and mouth seem acid, a little alkali taken in water, quarter of an hour before the milk, serves to counteract this acidity, and prevents the milk from becoming curdled by any remaining acid

The reason of abstaining from food in connection with milk is found in the fact that the gastric juice necessary for the digestion of even the smallest amount of substance other than the milk would curdle the milk, thus requiring a complete digestion of the entire quantity

The proof of the theory that there is some special mode in which milk acts when taken thus alone on an empty stomach, and with the assistance of an alkali when necessary, is found in the clinical experience which has attended a large number of cases in whom this plan has been practiced Many patients who before had been unable to take milk, because it excited in them the so called "bilious" condition, find that they can take it not only with impunity in this way, but with the greatest benefit Another proof is found in the feelings experienced shortly after thus drinking milk, which is often described as one of not only immediate refreshment, but even of exhilaration, which has been likened to that of taking liquor, and many patients, both nursing mothers and others, have repeatedly expressed to me their satisfaction at the success of what seemed to them at first a doubtful experiment

I trust this somewhat lengthy digression will be pardoned, as in reality it has a very decided bearing upon the subject under discussion, because, I believe that by this means of taking milk many infants can be well nourished on the breast alone who otherwise would either be poorly nourished by it, or would have other food given as supplemental, which would certainly not be as efficient as a full supply of healthy breast milk, such as has been provided by nature for the purpose

In the case of small infants with eczema where breast milk is not obtainable, there is a wide field for discussion in regard to the best mode of nourishment, which can hardly be touched upon within the limits of this paper All are more or less familiar with the various artificial foods which have been presented to the profession, and which have each received their advocates, and undoubtedly have each their merits Among the most prominent of these may be mentioned Mellin's, Horlick's, Nestle's, Ridge's, Carnrick's, Savory and Moore's, and what is known as lactated food, each of these and others are claimed by their proprietors as offering the most perfect solution of this most difficult problem, as to what is the best nourishment for the infant deprived of its normal supply—and yet the experience of all must have answered that as yet no perfect substitute has been found, and that indeed there probably never can be found any substance other than mother's milk which will suit every case

Undoubtedly the substance most like human milk is that from animals, and I have to declare my decided preference to this Nature's substitute above all those which have been artificially prepared with a view to represent, or to efficiently take the place of, milk from the human breast, and I have further to express my conviction that many more infants can take and thrive on cow's milk, when properly administered, than is commonly supposed, and my belief that these prepared foods are substituted for milk very frequently to the great disadvantage of the child

I will not occupy time in entering here into details which are familiar to all in regard to the preparation of milk for infants of different ages and conditions Suffice it to say, that special directions should be given in all cases where there is evidence of poor nourishment, and especially where eczema is present

As is well known, cow's milk does not represent human milk exactly, and often requires treatment to suit individual cases, different ages, etc The large proportion of casein in it often renders it difficult of assimilation, and commonly it will require dilution for younger children, while the proportion of fatty matter can be conveniently increased by using the upper third of milk which has stood 2 to 4 hours, a little sugar of milk and salt being added to bring up these ingredients to the proportion found in human milk It is hardly necessary to discuss further details in this direction, thus much is mentioned merely to qualify the claim that cow's milk is of universal service for young infants In some cases cow's milk can only be tolerated when it has undergone the process known as peptonizing, when it will then seem to afford the most perfect nourishment desired

In young infants with eczema, where the nourishment seems defective the greatest gain may sometimes be had from the addition of the yolk of an egg to the dietary This may be given once daily, either raw, or lightly cooked, as poached or boiled, either alone or in connection with other food, the white of egg is not desirable, and should not be given Cream also is often called for, and these will often be found to more than take the place of cod liver oil, which, however, is likewise most serviceable in many cases of strumous habit

I have not mentioned the use of barley-water in connection with the administration of milk because personally I am not in the habit of ordering it much, although it is recommended on high authority and is widely employed In certain cases it acts well in the way of preventing the formation of too solid a curd, and undoubtedly the small amount of nutriment furnished by the barley may be of value Gum arabic water will sometimes prove of service when added to milk, and possibly acts in the same manner

I will not dwell upon the subject of the use of condensed and preserved milk, except to record my approval of them commonly in preference to many of the prepared foods such as have been already alluded to While fresh milk is to be preferred where accessible, there are many occasions where these preparations of consolidated milk serve the purpose admirably well when properly diluted, and at times will seem to suit particular cases even better than fresh milk

I wish to call attention to the value of wheat products as an element in the nutrition of infants with eczema, as well as in those of older years Even quite young infants will be benefited greatly by the addition of crushed wheat to to their dietary, prepared as follows The wheat is well boiled, and then left to stand all night, and again boiled thoroughly in the morning, the second time It is then put in a fine sieve and water added to it, and it is rubbed until most of it passes through, leaving the hard and husky parts behind This may then be given in a fluid state, either mixed with water, sweetened and salted, or with milk, or it may be eaten as a mush In this manner the nutrient portion of the wheat is dissolved by the repeated cooking, and the phosphates and gluten are extracted with the starch, all in a very assimilable form, and are separated from the harder, indigestible portions, which often pass undigested and may do harm Wheat given in this way furnishes, I believe, about the most perfect nourishment for the growing child, and with milk supplies all that can be desired It is slightly laxative, and I have seen many cases of constipation overcome by its use

Coming to older children, that is those between 1 and 3 years of age, when the teeth are pretty well out, it is often most difficult to regulate the diet in such a way that it shall minister to health or recovery from sickness, and it will often require the greatest watchfulness on the part of the physician to prevent the little eczema patient from being made worse by dietary indiscretions The cereals should be given in increasing proportion, preference being given to

preparations of wheat, rather than oat-meal, which will frequently be observed to increase an eruption Bread made from whole wheat flour should be encouraged, eaten with plenty of butter, which improves these cases, especially if they are under an alkali medication Meat juice may also be given in moderation, but care should be exercised that it is not taken in excess, as there is danger of over stimulation, and I have repeatedly seen bad results from excessive use of beef-tea and animal food in these cases

As the teeth are formed the diet must of course be more varied and more freedom must be given, and parents will often think children ill-nourished if they are not allowed a great variety, indeed if they do not take the food of adults But the prodigious mortality from bowel troubles among children under 5 years of age reminds us that much knowledge is yet needed before those having the care of the young shall rightly attend to the diet If life can be thus endangered, the same or other errors in lesser degree must affect the state of the child both in health and disease

I will not take time to discuss more fully our interesting subject, or to enter upon more details in regard to the many possible matters in regard to diet which might be spoken of—they could readily fill a large book Enough has been said to introduce the topic for discussion and to present the points which experience has shown me to be of importance in connection with our subject, briefly mentioned these are as follows

1 The necessity of carefully watching the diet of infants with eczema, and giving special instructions that harmful articles may be avoided

2 Specific instructions in regard to food and its preparation for these cases

3 The more free use of milk, both for nursing mothers and for infants deprived of breast milk

4 The taking of milk by adults apart from all other food in the interval before meals, when an alkaline state of the stomach facilitates its immediate absorption

5 The more free employment of wheat products in the nourishment of older children with infantile eczema

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SCIENTIFIC COLLECTIVE INVESTIGATION OF DISEASE

Read in Section on State Medicine, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY HENRY B BAKER, M D,

OF LANSING, MICHIGAN

The purpose of this paper is to suggest how "collective investigation of disease" may be put upon a more scientific basis than is usually attempted, to urge the importance of such scientific investigations, and to point out how they may be equitably maintained, through the cooperation of physicians and governments A few illustrations of what has already been accomplished will also be mentioned

The term "Collective Investigation of Disease" has been employed by the British Medical Association to designate a method of investigation inaugurated by that Association in 1881, but urged by Dr Arthur Ransom in a paper before that Association in 1864 The movement was favored by Professor Humphry, Sir William Gull, Sir James Paget and others Referring to the first number of the "Collective Investigation Record," Dr William Roberts said "No one can read it attentively without acquiring a feeling almost amounting to a conviction that the movement is one of real importance, and that it will result in a large addition to our knowledge that could not have been got in any other way[1]" Mr Jonathan Hutchinson, has said "Permit me to say then, that I cannot for a moment doubt that our distinguished associate, Professor Humphry, when he persuaded our Association to organize the large scheme which we are here this afternoon to promote, has done that which will prove of great and lasting advantage to medical and surgical science It is a scheme which deserves from us all the best help that we can give it[2]"

It is usually claimed that one of the chief objects for which medical societies are organized is the promotion and advancement of the medical sciences The building up of an exact medical science cannot go on, with the greatest success, except through the collection of vast numbers of facts bearing upon each of the numerous questions involved, *and the union of those facts by methods which will admit of numerical expression* General laws are reached only through such measures Detailed histories of "interesting cases" of rare diseases, like the beautiful flowers along the pathway of the professional botanist, may serve as agreeable intellectual or emotional stimuli, but for the upbuilding of the medical sciences, we need the systematic collection and comparison of the most ordinary facts, and I think we must all agree with the Editor of the *British Medical Journal* when he says "The chief aim of collective investigation, as applied to the main body of the profession, should be to collect simple everyday facts that can be easily observed and recorded, and which are of value only from their number, and not from the importance of individual observations[3]"

There would seem to be no question that those diseases which are most common are the diseases which it is of most importance to study, for the purpose of learning their causes and how they may be prevented, avoided or treated This being granted, it is proper to inquire whether the medical profession should not ask the cooperation of the *whole people* in promoting those medical sciences which tend directly to the amelioration of the physical condition of mankind Leaving out of the question the subject of the *treatment* of disease, and confining it strictly to the subjects of the causation and best means of prevention of sickness, it would seem evident that the people as a whole should have much greater interests than the physicians have, and

[1] Brit Med Jour, Nov 3, 1883, p 860,
[2] Brit Med Jour, Nov 3, 1883 p 862
[3] Brit. Med Jour, July 7, 1883, p 20

should, not only cooperate, but should supply the greater portion of the pecuniary means for such investigations To a limited extent this is now done in one State (Michigan), and in my opinion the best interests of all will be subserved when it is done in every State in the Union, and by all Governments throughout the civilized world

How can this be done? Perhaps as suggestive an answer as I can give will be to state how one line of such investigation *is* done in Michigan In Michigan the State Board of Health supplies to physicians in different parts of the State printed blanks on postal cards addressed to the office of the Board The blanks contain a list of the most common and most important diseases After the close of each week each observer fills out and sends to the central office a report of the sickness under his own observation as a practitioner The investigation thus far has been limited to the question of the presence or prevalence of each of the important diseases, and it is so planned and compiled as to give this information quantitatively by months (It would give it by weeks if sufficient work were put into the compilation to make it show for weeks instead of by months)

The times of greatest and of least prevalence of each disease being learned in this manner, a similar method of investigation relative to the principal meteorological conditions which prevail is carried on by means of observers in different parts of the State, who take and record tri-daily observations, and report them to the office of the State Board of Health Tables are constructed showing the relations of each important disease to each of the important meteorological conditions, and diagrams accurately drawn to scale still more plainly show what those relations are For instance, I show you a diagram exhibiting by months the relations which sickness from pneumonia bears to the atmospheric temperature, the diagram giving the averages of over 150,000 observations of the temperature, and of over 30,000 weekly reports by physicians Of that which was contributed by the physicians who took part in this investigation, that which has been *used* from the report each week, was the fact whether the physician did or did not see a case of the disease in question The State Board of Health supplied the blanks, the postage, and the compilation of the whole in connection with the meteorological data similarly collected and compiled The results when published are sent to each observer, but they are published as the common property of the world It seems that by this method we are able to learn the times of greatest and of least danger from each important disease, soon we should be able to see exactly what relation each meteorological condition bears to each important disease If these investigations shall be carried on in different States and countries, we ought soon to be able to learn whether the meteorological conditions bear the same relations in all countries, or whether local conditions modify the results, and how they are modified It may be practicable to extend the scope of such investigations by governmental cooperation But at any rate, such cooperation as is now in force in Michigan, will make it possible for medical associations to direct *their* energies to investigations into results of different modes of treatment of diseases, and in therapeutic and other directions so as to supplement those investigations, as to causes and prevention, which it is manifestly the duty of Governments to maintain

PROMPT REPORTS NEEDED

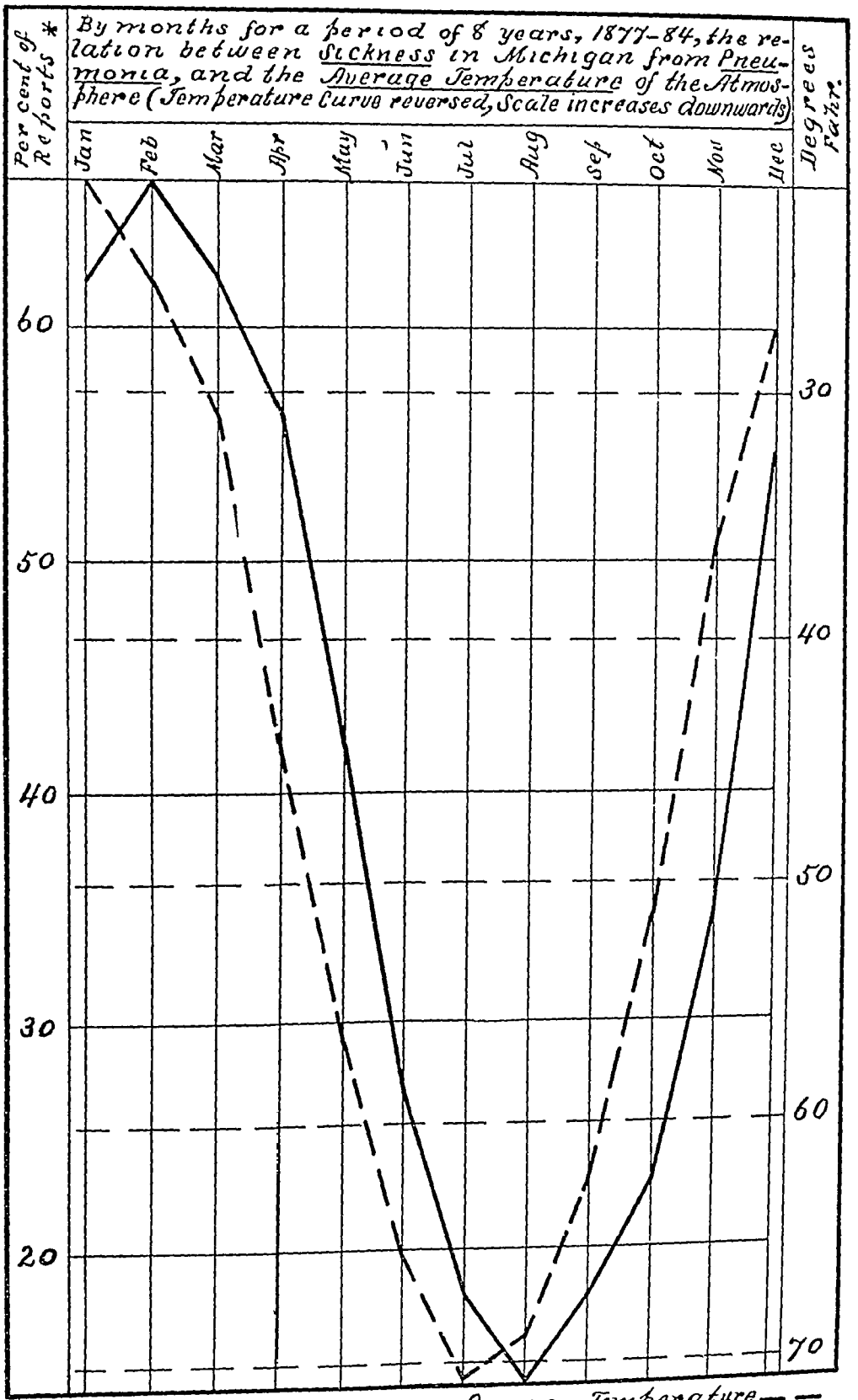
For the most accurate recording of *facts* which shall serve as the basis for the scientific investigation of disease, it is important that the record be made as near as possible to the time of occurrence of the phenomena recorded Otherwise the record is likely to be molded in the direction of preconceived views held by the recorder, because his attention will be attracted to certain phenomena, and he will lose sight of, or sooner forget certain other phenomena. In Michigan it took several years to learn how *much* better weekly reports are than annual reports, for the purpose of studying the prevalence of any given disease In April, 1876, the Michigan Board of Health issued a circular (somewhat like those since used by the Collective Investigation Committee) relative to scarlet fever, and collected facts of value, some of them relating to observations through many years, but on some points more precise information was desired For several years a circular was issued at the close of every year, asking for facts which had been observed during the year just passed But this method also was open to the objections which have been suggested

In September, 1876, the Michigan Board of Health inaugurated a system of weekly reports of sickness, copying somewhat after the plan which for a single year was followed in Massachusetts [1] At first the plan (in Michigan) was defective in that the reports were designed to give the observers best knowledge and belief relative to the sickness in his vicinity, and he was not directed to confine his reports strictly to the cases under his own observation There was then an idea that a great proportion of the sickness in a locality might be reported with approximate accuracy by one of the several physicians in that locality The present plan is based upon the belief that an accurate report of just what was seen by the reporter supplies much more useful facts for scientific study, and that an average practitioner in active general practice, will "in the long run," see an average of the cases of diseases which most frequently occur The present plan supplies the facts, and they are reported within a week after their occurrence It seems to me that this is Scientific Collective Investigation of Disease, and that it is an important work which should be entered upon by all State Boards of Health, and by a National Board of Health, and that physicians should seek to cooperate so far as practicable in such investigations

SICKNESS REPORTS AS SANITARY NEWS

I respectfully submit that the weekly or monthly records of deaths, which are now usually published

[1] I believe that a similar system was carried on in England for a short time about the year 1857 and that an unsuccessful effort to have the Government adopt and pay for its continuance was followed by its abandonment as too expensive for private enterprise by the physicians who had perfected it

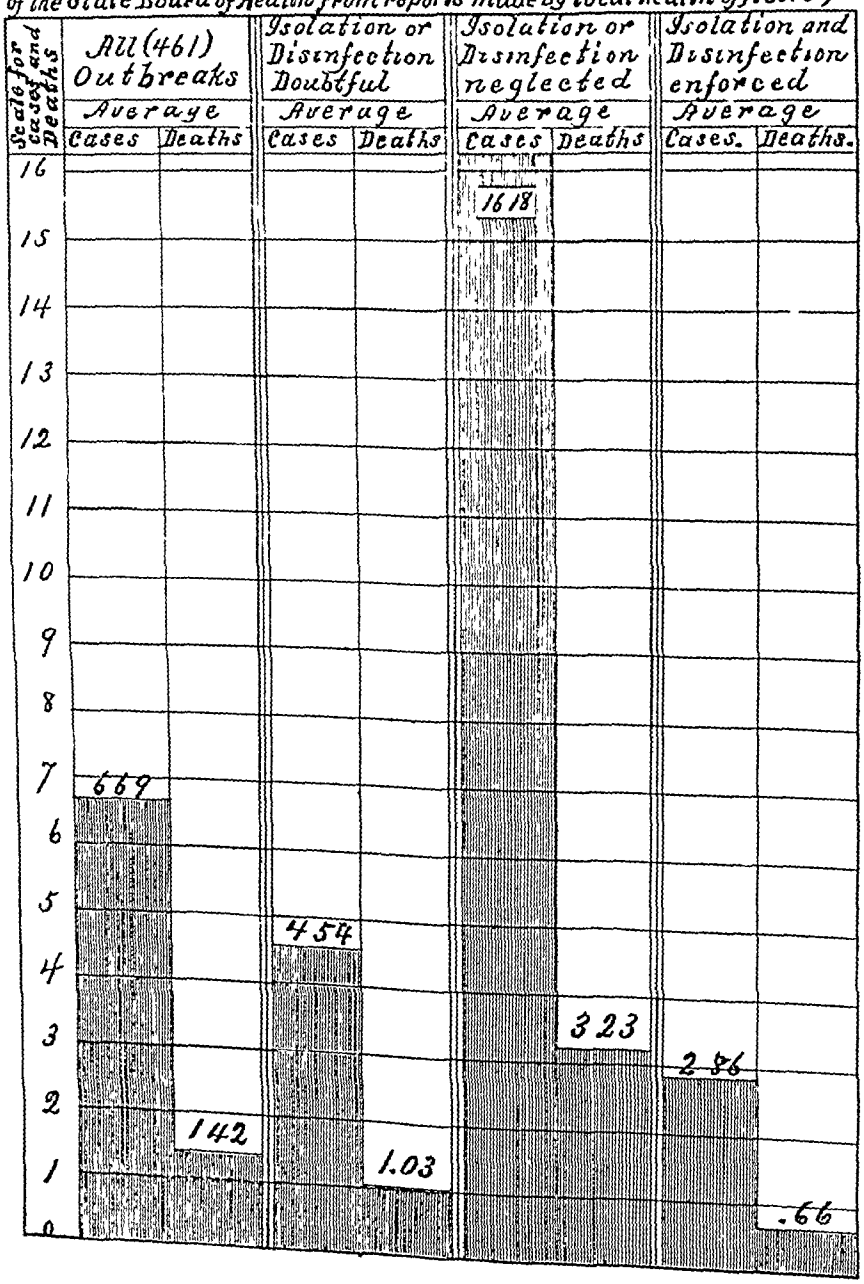


Sickness from Pneumonia ———. Average Temperature — —

*Indicating what per cent of all reports received, stated the presence of pneumonia then under the observation of the physicians reporting.

Over 30,000 weekly reports of sickness, and over 150,000 observations of the atmospheric temperature are represented in this diagram.

Diphtheria in Michigan in 1886, exhibiting the Average Numbers of Cases and Deaths per outbreak - (1) in All the 461 outbreaks Reported, (2) in the 243 outbreaks in which it is Doubtful whether or not Disinfection or Isolation were secured, (3) in the 102 outbreaks in which Isolation or Disinfection or both were neglected, and (4) in the 116 outbreaks in which Isolation and Disinfection were both enforced (Compiled in the office of the Secretary of the State Board of Health from reports made by local health officers)



by boards of health as items of sanitary news, might well be displaced or supplemented by statements of the average sickness which has been observed during the week or month, as the case may be, and reported on this plan of collective investigation There are two good reasons why it should be done

1 There are diseases, which cause much sickness and consequent suffering and expense, which are not correspondingly represented in the mortality statistics I think this may be appreciated by a study of the bulletin of sickness in Michigan in the month of May, 1887, a copy of which I submit herewith, and from which it may be seen that neuralgia, bronchitis, and intermittent fever rank high as causes of sickness, while we all know that those diseases do not rank high as causes of death

HEALTH IN MICHIGAN, MAY, 1887

Reports to the State Board of Health, Lansing, by regular observers in different parts of the State show the diseases which caused most sickness in Michigan during the month of May (four weeks ending May 28), 1887 as follows

NUMBER OF REPORTS RECEIVED 221		For preceding month
Diseases, Arranged in Order of Greatest Prevalence	Per cent of reports stating presence of disease	Per cent. of reports stating presence of disease
Rheumatism	71	79
Neuralgia	67	73
Bronchitis	57	64
Consumption of lungs	51	58
Intermittent fever	49	52
Tonsilitis	47	54
Influenza	39	43
Pneumonia	33	42
Diarrhœa	30	30
Remittent fever	30	30
Erysipelas	29	28
Measles	28	22
Inflammation of kidney	19	22
Inflammation of bowels	15	17
Whooping cough	13	11
Cholera morbus	11	4
Dysentery	9	7
Typho malarial fever	8	12
Inflammation of brain	7	4
Diphtheria	6	4
Puerperal fever	5	7
Cholera infantum	5	2
Cerebro spinal meningitis	5	2
Scarlet fever	5	9
Membranous croup	4	6
Typhoid fever (enteric)	3	3

For the month of May, 1887, compared with the preceding month, the reports indicate that cholera morbus increased, and that pneumonia, influenza, rheumatism, bronchitis, consumption of lungs and tonsilitis decreased in prevalence

Compared with the preceding month, the temperature in the month of May was much higher, the absolute humidity was much more, the relative humidity was about the same, the day and the night ozone were more

Compared with the average for the month of May in the nine years, 1879–1887, intermittent fever, remittent fever, consumption of lungs, scarlet fever, diphtheria and diarrhœa were less prevalent in May, 1887

For the month of May, 1887, compared with the average of corresponding month for the nine years, 1879–1887, the temperature was higher, the absolute humidity, the relative humidity, and the day ozone were more, and the night ozone was less

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of May, 1887, at thirty places, scarlet fever at thirty two places, typhoid fever at four places, measles at fifty places

Reports from all sources show diphtheria reported at five places more, scarlet fever at seven places less, typhoid fever at four places less, measles at fourteen places more, in the month of May, 1887, than in the preceding month

Lansing, June2, 1887 HENRY B BAKER, Sec'y

2 Records of deaths are very valuable for purposes of study, but as indications of existing dangers they are not as good as reports of sickness After the deaths have occurred, have been reported, and published, the time has passed for best guarding against the diseases which caused the deaths On the other hand, prompt reports of sickness enable a State Board of Health to aid local health officers in restricting dangerous communicable diseases, and the publication of the facts concerning such sickness would be of much greater value to the people of the locality and to the health officers who would receive the reports in exchange, than are the present reports of mortality statistics

INVESTIGATION OF PRACTICAL RESULTS OF SANITARY WORK

Collective investigation can be successfully applied to many other results than those of the different modes of treatment of diseases For instance, I show a diagram exhibiting, graphically, the results of different modes of action with a dangerous disease of children, namely, diphtheria, the facts having been reported, immediately after the outbreak closed, by health officers, to the State Board of Health, not exactly in accordance with the plan of cooperation by government and physicians, which I have recommended in this paper, but nearly so, because as yet the health officers have too little compensation for such official reports to entitle the government to have credit for the entire work The evidence, when compiled and graphically shown, seems to me to be of immense value as a guide to proper efforts for the prevention of sickness and deaths The diagram shows that in 102 outbreaks of diphtheria in which isolation or disinfection, or both, were neglected, the average number of cases was 16 18, and the average deaths were 3 23, while in the 116 outbreaks in which isolation and disinfection were both enforced the average cases and deaths were only about one fifth as many, indicating a saving of about three hundred lives and 1,545 cases of sickness from diphtheria The inference is strong that if this was true of one or two hundred outbreaks of diphtheria in Michigan in 1886, it may be found to be true in other States and in other years, in which case the knowledge gained by the investigation ought to be of immense utility in guiding to the saving of human life and health

DISCUSSION

DR H C MARKHAM, of Independence, Iowa, thought this paper should give an impetus to our efforts at reporting

DR A N BELL, of New York, asked whether local conditions could not be included in Dr Baker's charts Many places of equal temperature would vary greatly in disease rate, on account of local conditions

DR J M ALLEN, of Liberty, Mo, thought that the States fail to discharge their duty in the matter of providing means for these investigations In the present instance, therefore, we owe the State of Michigan a vote of thanks (as well as Dr Baker), for its action has been exceptional

Remarks were made by others, showing the extreme difficulty of influencing State legislators to act

Dr Baker said we must go slowly, but in time we can get at what Dr Bell suggests Money will be given more willingly when this work is also done in other States Michigan has done well in this matter since 1876 Massachusetts carried on the work one year and then dropped it

THE PROPRIETY AND NECESSITY OF STATE REGULATION OF MEDICAL PRACTICE

Read in the Section of State Medicine, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887,

BY PERRY H MILLARD, M D,

FIRST VICE PRESIDENT AMERICAN MEDICAL ASSOCIATION EX PRESIDENT MINNESOTA STATE MEDICAL ASSOCIATION SECRETARY MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

In the year 1237 the college at Salino, which was founded early in the eleventh century, instituted a series of regulations to the effect that no one should practice physic who had not studied philosophy three years and physic five, and had obtained the license of the college after undergoing an examination at the end of such period Very similar regulations were shortly thereafter adopted by the English universities, and the standard of medical knowledge and education was thereby considerably raised, and a great impetus given to the pursuit of medicine The first degrees in medicine can be traced back to the year 1384

We find by comparison, that one hundred and fifty years before degrees or diplomas were granted, the universities licensed candidates to practice only after they had pursued philosophy three years and physic five, and that six hundred and fifty years thereafter, in 1887, the requirements of 73 per cent of the schools of the United States require only two courses of lectures and three years' study It would, however, be unfair for me to omit the startling fact that a certificate of good moral character is a *sine qua non* from all the schools of this country

The first law regulating the practice of physic in the United Kingdom was enacted in 1511 The practice of physic at this time was largely conducted by the ignorant portion of the artisan class Degrees, however, conferring the right to practice, were held in very high esteem by the people

The progress of medical knowledge during the seventeenth century has been ably described by Mc Cauley, in vol 1, page 310, of his History "Medicine," he says, "which in France was still in abject bondage and afforded for Molière an inexhaustible subject of just ridicule, had in England become an experimental and progressive science, and every day made some new advance in defiance of Hypocrates and Galen The attention of speculative men had for the first time been directed to the important subject of sanitary police "

To that period belong the chemical discoveries of Boyle, and the first botanical researches of Sloan One after another, phantoms which had haunted the world through ages of darkness, fled before the light, and astrology and alchemy became jests Upon research I find that in ancient times effective medical legislation and higher medical education progressed hand in hand After extensive research I am unable to find that any court or legislative body in the British Isles or Continental Europe ever questioned the propriety of effective medical legislation

It seems quite absurd that the propriety of regulating the practice of medicine should be questioned by any respectable portion of the profession of this day My experience, however, teaches me that such opposition is quite pronounced with a few Their principal reasons for such opposition lies in their misguided interpolations of the functions of a republican form of government, and an extreme conservatism in all matters pertaining to their chosen profession Those of us who have been missionaries in this work of reform for some time have not infrequently found the representations of many of our reputable medical schools working arm in arm with the long-haired quack, in their endeavors to strangle the crudest forms of legislation I make the broad assertion that practically the only opposition to effective medical legislation in this country comes from the profession itself, and that this opposition comes principally from the representatives of the seventy-nine medical schools of the United States, that continue to graduate men upon the courses of lectures of twenty weeks' duration each It is unnecessary that I should point to New York, Illinois or Minnesota to verify my assertion It is certainly the duty of the chosen representatives of the people, the legislature, to protect an ignorant and credulous public from empiricism and imperfectly educated medical men and women No profession or vocation is allied so closely to his material interests, yet, in the selection of a medical adviser the community, not infrequently, cares but little for a man's actual medical ability The masses of the community, in the selection of a family physician, make it upon personal grounds alone Were one of us stricken by disease or accident in the streets of this city, we would probably obtain more skillful treatment at the average hospital than at a friend's house upon the most fashionable avenue The propriety of the regulation of the practice of law is never questioned Every State in the Union regulates the practice of law with an iron hand The attorney that defrauds his client has his license revoked, and there is no complaint thereat Ecclesiastical councils regulate the actions and utterances of their clergy by canons quite as strict as in the days of Martin Luther, and the courts endorse their findings with the precedent of the common law as their argument In the cities, the construction of our homes, even, is superintended by the sanitary police

It is, however, ordained that in our profession, the noblest of them all, we shall be left to a competition that is intolerable to an educated man I find upon examination of the literature of medical legislation, that the United States is the only civilized country that is devoid of restrictions regulating the practice of medicine There are at the present time, however, about thirty States with so called medical prac-

tice acts The new acts of Minnesota and Virginia are the most nearly ideal of any, as they are a deadly blow at the cheap schools of this country They fail to recognize the diploma of any school, and examine all parties commencing the practice of medicine

The laws regulating the practice of medicine in Illinois, West Virginia, Minnesota, Missouri and Iowa, have accomplished much in certain directions Their efficiency has been very apparent in weeding out the itinerant quack and undergraduate In Minnesota the number of undergraduate practitioners has been reduced from 37 to less than 8 per cent in four years In Illinois the reduction has been quite as great It is the experience of these boards that the average American diploma does not command the respect or confidence of either the profession or public They find that, as a general rule, colleges are private corporations, operated by and in the interests of a few individuals, whose personal and pecuniary interests—acting with the tendencies of competition—have brought about a state of affairs in which a diploma has practically ceased to furnish any reasonable presumption of respectable professional acquirements

We find the number of graduates in this country since 1880 to be 27,000, and the number of practitioners of medicine about 100,000 This gives us an increase of the number of physicians at the rate of 5 per cent, to an increase of population of less than 2 per cent

In short, the number of graduates of medicine in this country since 1880 closely approximates the combined output of the medical schools of the British Empire, France, Austria and Germany, combined We find that the system of placing the licensing power in the hands of a body directly responsible to the people and entirely independent of and disconnected from the teaching bodies, is the one which prevails in almost every civilized country in the world We have in the practice of medicine in the United States to-day, one physician to every 755 inhabitants They have in England and Hungary one physician to every 1666 inhabitants, in Italy, one physician to every 1639 inhabitants, in Austria, one physician to every 2932 inhabitants, in Germany, one physician to every 3225 inhabitants, in France, one physician to every 3780 inhabitants, in Sweden, one physician to every 7909 inhabitants It will, therefore, be seen that the proportion of physicians to the population is ten times as great in this country as in Sweden, four times as great as in France, Germany and Austria, and twice as great as in Great Britain, Italy and Hungary

The number of medical schools in this country is on the increase, and this increase is not in response to the demands of either the profession or public Of the 130 medical institutions in this country, less than one dozen are in any way endowed Seventy-nine colleges of this country graduate men upon two courses of lectures and three years of pupilage We find by a report of the United States Commissioner of Education for the year 1881, that there are $2,672,490 invested in the ground, buildings and apparatus of the medical schools of the United States The amount of productive funds of these schools is $266,193, and the annual income from investments only $22,000

When we examine the facilities and demands of this country, with those of the British Isles and Continental Europe, we necessarily conclude that the foreign schools exact too much, or that our system is painfully crude and lax The Commissioner of Education remarks that, considering the enormous amount of knowledge that has been accumulated respecting the proper treatment of disease, its prevention and its nature, the impression becomes irresistible that we have been influenced by our national impatience and furious haste in this matter, as in many others, and that we have allowed the students to dictate the length of time they are to study, instead of obliging them to prepare suitably for this important course of instruction and to spend enough time to receive it properly and retain it securely I can but conclude that the low standard of medical education and the absence of uniform legal requirements by the respective States, is the cause of the overcrowded condition of the profession of this country

Dr Rauch, in his "Eighth Annual Report," asserts that there are from 1,500 to 2,000 more physicians in practice in this State than are necessary to supply the legitimate demands for professional services, and who are not earning a comfortable livelihood by legitimate professional exertion

How to prevent the flooding of this country with half educated medical men, will be the vital question with the profession in the coming decade I believe the only efficient remedy lies in efficient medical legislation Having this, the cheap two course school cannot continue to exist With efficient Boards to examine all parties commencing the practice of medicine, a school will best be known by the proportion of its alumni that are able to pass the required examinations, instead of by its numbers and flexible curriculum The profession has been aiming its arrows of criticism at the schools the past decade, and the product of their labors has not been commensurate with their demands These schools are perpetrating a rank injustice to the schools that are striving to exist by enforcing a curriculum that commands the respect of the profession They are perpetrating a similar injustice upon the masses of the profession and the public, and unless it ceases in the near future, I predict a revolution of sentiment that will swing the pendulum to an opposite extreme The present aspect of medical legislation in this country is painfully unsatisfactory We have not an ideal Medical Practice Act in any State in the Union The nearest approach thereto is the new Act of Minnesota By the provision of this Act, every person commencing the practice of medicine must pass an examination and furnish satisfactory evidence of having taken three full courses of lectures of not less than six months' duration each

Under existing circumstances, it is our duty to secure efficient medical legislation in every State in the Union The essential features of such legislation should require a minimum of literary and profes-

sional acquirements The time of study should be not less than four years, of not less than three full courses of lectures of six months' duration each The respective Boards should be empowered to refuse or revoke licenses for chronic inebriety and grossly dishonorable conduct The power conferring the right to refuse or revoke a license should only be used in flagrant cases

The respective Boards should be appointed by the Governor and confirmed by the Senate The term of service should be three or five years, and no member be allowed to serve to exceed two terms in succession The Governor, in the selection of members constituting the Board, should aim to obtain the most intelligent and honorable gentlemen at his command

It is proper that established schools of practice should have representation upon the Board, but the examiners should confine their examination to questions common to all schools of practice All examinations should be held in public, and made a matter of record The several papers should be accessible to properly interested parties at all times

In conclusion, gentlemen, allow me to direct your attention to the social and financial status of the medical professson of this country Had we been alive to our interests, our present environment would have been far different, the pursuit of medicine would offer better inducements to the educated masses today Finally, let me insist upon a renewal of our zeal in behalf of our material interests, and cooperate in obtaining at the hands of the legislatures of the different States such regulations of the practice of our profession as will place the standard thereof upon a citadel of greater strength and power

DISCUSSION

Dr James E Reeves, of Wheeling, W Va, remarked upon the importance of the paper, but advised caution in making a common standard for the practitioners of all communities There are some communities where a man of first class medical qualifications could not live It would not pay such a man to settle down in a community where there are only forty or fifty inhabitants, and they of the common class Therefore such a community might be left without a physician The demand regulates the supply Provision must be made for the out of the way places He would therefore counsel to go slow and to exercise judgment in the matter of a standard, if the same questions are to be asked of all applicants for license to practice

Dr J M Allen, of Liberty, Mo, suggested that there should be a supervising college of the United States Each State should have its standard, and there should be but one power in the State for granting diplomas

Dr W L Schenck, of Osage City, Kansas, said In Kansas we have no medical school, and want none until the State can endow one without regard to the number of students

A resolution was passed appointing a committee of five, to report at the first meeting of the Section next year, to frame a bill for recommendation to different States, regulating the practice of medicine This committee consists of Dr P H Millard, Dr H A Johnson, of Chicago, Dr R H Plummer, of California, Dr Geo B Belt, of Massachusetts, and Dr C W Dulles, of Pennsylvania The committee was instructed to report to the Section on the first day of the next annual meeting

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THE TREATMENT OF MALARIAL FEVERS IN THE INFANT AND THE YOUNG CHILD

Read in the Section on Diseases of Children, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887

BY W B LAWRENCE M D,
OF BATESVILLE, ARK

As a great majority of my cases of sickness in children have been of malarial origin, I will at least make an attempt to give some of my ideas, or rather mode of treatment, of such diseases I said a great majority of my practice is of this character, which, no doubt, is correct, as I can only call to mind two cases of diphtheria treated, and I have been through a mild and short epidemic of scarlet fever in a practice of ten years Still, at the same time, I do not wish to convey the idea that our part of Arkansas is more pregnant with malarial poison than many other portions of the United States, which are not considered uninhabitable

My home is an old town, and a place probably of 2000 inhabitants, with the surrounding country thickly settled, and the town several hundred feet above the sea level, situated on quite a hill, at the foot of which runs a beautiful and rapid river Still the Eastern winds from the great Mississippi Valley bring us more or less of this poison, the year around Flint says this poison shows itself in the shape of the different fevers in the interior Valley of North America The regions in which it has most frequently prevailed, are the level portions of Alabama, Mississippi, Louisiana, the Southern Shore of Lake Michigan from Chicago around to St Joseph River, and Lake Erie and Lake St Clair, from Lake Huron to Lake Ontario near estuaries of the creeks and rivers So you see from this that when we leave home, we do not always leave the malaria behind us

My desire is only to speak of the treatment of these fevers according to the By laws of our Association, I would not have the time, if I felt in the least competent or inclined to undertake the work of saying anything of the clinical history, anatomical characters, causation, diagnosis and prognosis Many of us are so unfortunate as not to be able to write a very simple and interesting article on any topic or disease, although we have had the opportunity of treating and watching these diseases in all of their many forms and stages, and if such be true, how much less able are we to write of something which we have never seen, or had any dealings with, except what others have told us, or in other words, we must give our own ideas and experiences, and at the same time lay them right open for criticism After some persuasion, I offer this as an effort to add something to our Section Let each one have am-

bition enough to bring it forward Men of pride do not like to lag and see any of their undertakings sink into insignificance or die So, if we have any pride for the much neglected Section, each one must attend and offer something And another reason for attempting to present this subject, is this, that our standard text-books on diseases of children, such as J Lewis Smith and Ellis & Vogel, say but little Certainly, we find quite an exhaustive article on the subject of the treatment of malarial fevers in the great works of Flint and other good authors, but they do not speak specially concerning the fevers, or the treatment of such in infancy and childhood, and certainly articles applying strictly to such would aid the practitioner very much in his treatment

Dr J Lewis Smith, in his most instructive and readable work on "Diseases of Children," under the head of "The Treatment of the Different Malarial Fevers," covers the whole subject in forty or fifty lines, and does not mention more than six or eight different drugs Vogel and others go over the subject in about the same manner Most of them place but little importance to the management of these fevers in any form In most of the different types of these fevers, and especially if bordering on a pernicious form, they certainly require much attention, although the patient may not be in a dangerous condition, for this reason the little fellows suffer so much with sick stomach, restlessness and often accompanied with convulsions With these symptoms, these children's parents cannot be satisfied until some relief is afforded, and especially during the convulsive period

Numbers of writers will say that in all forms of these fevers, cinchona or some one of its preparations is the "sheet anchor" Admit such to be the case, keeping the anchor in the patient's stomach is often a task of itself, and very frequently we fail in the attempt Another assertion is this "Open the bowels with a mild purgative or an enema" We will try to show that such treatment in some cases, will not afford any relief, for the mild purgatives, such as senna, rhubarb, castor oil and magnesia often cannot be tolerated, and can in a more pernicious type after acting on the bowels, afford but slight relief I believe such to be the case

I will first endeavor to speak of the treatment of the milder forms of intermittent fever, either of a quotidian, a tertian or a quartan *First*, in the simple or mild intermittent fever, and I presume we are to understand by this fever one wanting in grave or alarming symptoms, I do not think it necessary but to barely mention the fact that the bowels should be opened, and one of the preparations of quinine given in doses according to age, which of course, means a sufficient quantity

Of pernicious intermittent fever, this form in many cases can be prevented, and many lives saved, by attention during and after the first paroxysm, that is we prevent others of a grave and maybe a fatal type When the fever becomes pernicious, we have two objects in view, namely to see our patient through the existing paroxysm, and to keep off another

In the first of these, suppose our case an infant, for example, say 4 months of age In the cold stage, my experience is that they remain for a shorter time than older children or adults, and that we can more quickly, and with less work bring about reaction In the 4 month infant, or maybe some older, this is generally done by applying heat to the surface or wrapping the child in a blanket But we may have much trouble with this aged infant in the hot or fever stage, and more especially if it goes into convulsions Should the fever go very high, aconite nitre, paregoric and bromide of potassium in water, dose according to age, the sick stomach which we frequently find to be very annoying, is oftenest relieved by bromide of potassium or a creasote mixture If convulsions come on, put the little fellow in a warm bath or wrap in a warm wet sheet or cloth of a proper kind, move the bowels as soon as possible by enema, and if you can't give the antispasmodic by the mouth, administer it per the rectum, such as hydrate of chloral or bromide of potassium As soon as the sick stomach subsides and the temperature is on the decrease, as a general rule, I think it quite necessary to give an active purgative Not always, but quite often, order mercury in the form of calomel, and in these extremely pernicious attacks, I have not been able to find anything to take its place I will say just here that I have never administered a dose of mercury in any form to either an adult, child or infant, that did the least harm in the way of salivation, in fact I never had but two of my cases in the least affected by it, and these very slightly and for only a short time

As soon as the patient can bear quinia, we begin it, whatever the type, and if quotidian, we have no time to lose So we try to give our 4 and 6 months', or probably 12 months' infant a sufficient quantity of quinia sulph We have tried it in many forms, not as the saying is, to "disguise the taste," but rather to prevent nausea, such as elixir of licorice, lavender, malt, aromatic elixir, and also the cascara cordial In some cases all fail, however, as a general rule, I find the licorice the surest, I think the cascara cordial acts too much on the bowels On account of this sick stomach in a number of cases are forced to give the anti-periodic in another mode or channel, that is *per rectum* or by inunction, and with our little syringe and quinia we get much satisfaction from the rectum plan Of administering quinia by inunction, I will say but little I frequently order in large quantities, still I am not able to say how much good it does in preventing a paroxysm, but think it aids in many cases to a certain extent I have never ordered it in anything but pure hog's lard I will mention a case as an example I have a little niece 2½ years of age She has had two or three attacks of ordinary intermittent fever In the first spell, I ordered sulphate of quinine in an anti nauseating mixture, but she could not retain a single dose, then I ordered it by inunction, which prevented a second paroxysm of anything like serious nature The child is now 2½ years of age, and has never taken but the one dose by the mouth, which was vomited I have several times used the inunc

tion, and it looks very much as if it has prevented pernicious attacks

Concerning the treatment in this form of fever in the young child, say 5 or 6 years of age These cases we can manage with more satisfaction to ourselves than we could in the infant, for the reason that it will allow more to be done for its relief In the cold stage we will find often more urgent treatment required than in the little fellows I should, in the first place, see that the heart's action is kept up towards normal, if possible, with stimulants, they may be alcoholic, brandy or whiskey will suffice, but if they fail I should try ether, and with it ammonia, by inhalation and mouth I have also very frequently given nitrite of amyl by inhalation, dose ℥ ij–v in a handkerchief is a very convenient mode of administration, and I have found this to to be a very valuable remedy In fact, I think it one of the best stimulants in this stage of the disease In some cases, at this age, I have given morphine hypodermically, and especially in cases suffering with sick stomach and restlessness, I find that it affords great relief, brings about quiet, and aids good circulation very much, and in many cases is the only thing that will give relief I have given chloroform in from eight to ten minims, but with little good, if any While administering the above remedies, or some others, I order mustard in the form of plasters to the ankles and wrists and, at the same time, friction with flannel cloths

Now, after helping to nurse our patients into a hot stage, we, if this hot stage becomes serious, try to cool them down In some cases this is the alarming period, in others just the reverse I give about the same febrifuges as mentioned heretofore Sometimes I resort to the tr verat viridide I have never given antipyrin to children with those fevers, I have ordered it this winter and spring in a few cases of pneumonia with a very high temperature, say 104° and 105°, it always reduces the temperature, but I think prostrates more than veratrum I have found but little if any good from quinia in this hot stage I almost invariably find it necessary to employ quite an active purgative and give it as soon as possible I have given rhubarb in different forms, powder and fluid extracts, senna and podophylin, and many other drugs I have not found anything to take the place of calomel If you have a quotidian type you have no time to spare, so administer the purgative, and while the patient is taking it, if the stomach will tolerate, give within 12 or 15 hours, gr xx of quinine We may be compelled in some cases to give it as suggested in the cases of the infants If the case require anti spasmodics, give them, or about as suggested for the infant, only the dose in proportion to the age

In the treatment of remittent fever, so soon as you are sure you have this form of fever to treat, there is that old remedy which is required in all cases, namely, cinchona, or its equivalent, quinia In sthenic cases I should employ a light febrifuge, and as soon as the fever gives away, give a proper amount of quinine, for restlessness, in insomnia, give bromide of potash and comp pulv ipecac, open the bowels freely, apply frequently cool cloths to the head, and order a warm mustard foot bath These remedies often do much good

We may be forced to do more than this if the fever takes on a pernicious form The patient may require chloral hydrate or morphine to quiet him, of a mild, mercurial purgative, frequently combined with santonine, followed with oil To break up an attack of remittent fever without these things, is often impossible I have had many a patron to say "*Doctor you will have to come to our child It has had fever for three or four days, and a 'high one' We cannot break it We have given pills or oil, or probably one, or half a dozen domestic purgatives, and followed with a good amount of quinine for two or three days, but our treatment does no good*" And if I find such to be the case, I generally give the calomel and santonine, and in a number of cases never make a second visit The fever gives away in a number of instances within 10 or 12 hours But frequently in a child of from 5 to 8 years of age, this fever will continue in spite of all our treatment, for 10 or 15 days, and maybe longer After active treatment for 3 or 4 days, and the symptoms point to such a continuation, we begin a treatment similar to that of typhoid fever, that is, use tonic doses of quinine and one of the acids A mild febrifuge, if necessary, keeps the bowels regular, and light stimulants after fever has continued some days Order iron to be given for a short time after the fever has given away

I will only say a few words of the treatment of that pernicious form of intermittent commonly called in the South, "Hæmorrhagic Malarial Fever" It is always considered dangerous I have never seen a case of it in the infant, and very seldom do we see a case in our part of the State, either in the adult or the children, however, occasionally in both Our plan is to keep the patient well cared for in blankets, use mustard freely in form of plasters over the region of the kidneys and stomach, give active cathartics but very little quinine, it seems to aggravate the disease The restlessness and sick stomach are best controlled by hydrate of chloral or bromidia During the passage of blood so freely, give buchu, fluid extract of, and hyposulphite, dose according to age

I would like to say something of the treatment of chronic malarial poison, but do not wish to be tedious to the Section, and for that reason, am afraid I have not done this subject anything like justice

MEDICAL PROGRESS.

THE AFTER TREATMENT OF DIFFICULT LAPAROTOMIES — P MULLER, of Berne, reports a case in which adhesions took place between the anterior and posterior walls of the abdomen over an extent of 25 cm , in such a manner as to include a knuckle of small intestine In order to prevent such accidents he advises the avoidance of bandages which exert pressure in all cases where there are extensive wound surfaces in the peritoneum In the second place he

proposes to prevent adhesions by filling the abdominal cavity after laparotomy with a sterilized neutral solution He employed this method in a case in which he found extensive adhesions, using 2,400 grams of a 0 7 per cent solution of salt, which he poured into the abdominal cavity through a drainage-tube introduced into the upper angle of the incision This sufficed to fill up the cavity, occupying as much space as the tumor had previously taken up Soon after the operation the patient was seized with dyspnœa and the pulse ran up to 150 Then profuse diaphoresis and diuresis gradually relieved the artificial ascites, which disappeared by the sixth day The results with regard to the prevention of adhesions were entirely satisfactory The writer believes that it is unsafe to employ as large a quantity of the solution as he did in his own case, but he intends to experiment in the same direction with smaller quantities, to be thrown in every 3 hours by means of the double canula, or to be employed by means of permanent irrigation —*Centralbl fur Gynak*, No 25, 1887

THE EFFECT OF HYOSCINE HYDROCHLORATE — KOBERT, of Dorpat, Russia, is quoted as follows by *Schmidt's Jahrbuch*, 1887, No 7, in the results of his use of this drug as a sedative

Hyoscine, when given in large doses, is excreted as such by the kidneys A small amount of the urine of an animal thoroughly under the influence of hyoscine, when dropped upon the heart of a frog which had been poisoned by muscarine, will cause the heart which was quiescent to beat Hyoscine is thus an antidote to muscarine In the same way, muscarine, by its stimulant power over the pneumogastric, will cause a heart to beat which had been stopped by hyoscine The effect of the drug is the same upon the human subject as upon the frog In the case of a patient with melancholia, whose pulse was slow, an injection $\frac{1}{60}$ of a grain produced a very perceptible acceleration In small doses, of $\frac{1}{120}$ to $\frac{1}{60}$ of a grain, hyoscine is a weak narcotic to healthy beings Numerous observations made upon the large numbers of patients at the Dorpat Clinics for Insane Patients, have proved its excellence as a reliable hypnotic, when given subcutaneously in doses of $\frac{1}{120}$ to $\frac{1}{60}$ of a grain of the hydrochlorate A peculiarity of the use of hyoscine was the absence in the cases noted of all ill after-effects produced by the drug —*Therapeutic Gazette*, Aug 15, 1887

STROPHANTHUS IN HEART DISEASE —MR MONTAGUE D MAKUNA says Having recently had occasion to prescribe it in two cases with excellent results, I take this opportunity of bearing testimony to its action as a certain cardiac tonic and powerful diuretic, with a hope that it may induce others to use it when they find themselves in a dilemma, and feel anxious to resuscitate the failing action of the heart I have used it firstly in four cases of angina pectoris, in two cases associated with dilatation of the heart A fortnight ago I was hurriedly called to see a young man, aged 25, in an agony of pain, with tumultuous action of the heart Within five minutes of the administration of a five-minim dose his breathing became quiet, pain disappeared, and the rhythm of the heart's action was restored In two cases of dilatation of the heart, the patients took five minim doses three times a day with marked benefit

Secondly I have used it in two marked cases of fatty degeneration of the heart I had a patient, aged 45, under treatment when Prof Fraser read his paper, and whose life was altogether despaired of at the time The state of degeneration was much advanced, and she had some general dropsy She lived to take it for nearly eight months—five minim doses three times a day, but about six months after its first administration the cardiac response became more and more feeble, until she succumbed I believe her life was prolonged with some comfort solely by the use of strophanthus I have at present a case of fatty degeneration of the heart in a woman, aged 49, accompanied by attacks of angina, much dyspnœa, and palpitation I have administered to her five minim doses every hour till the action of the heart is quieted and the breathing rendered easy She now takes it three times a day in the form of a mixture, which can be safely trusted to the patient, namely Tinct strophanthus, f℥iss, extract ergot liq f℥vj, spirit chloroform, f℥iss, aquæ lauroceres ad f℥iv, a teaspoonful three times a day in a wineglass of water The latter patient has taken this mixture during the last week with marked benefit

I have had, unfortunately, the experience of tincture prepared from other parts of the plant than the seed, in two cases which eventually proved fatal Judging from actual observations at the bedside, I cannot but pronounce it as uncertain in action and totally unreliable, notwithstanding the assurance of the druggist of its equal efficacy when the supply of the seeds had gone out of the market at the end of last year —*British Medical Journal*, Sept 3, 1887

NAPHTHALIN IN PILL FORM —BERNBECK has found that a pill covered with elastic collodion is especially useful in administering this drug His formula is

℞ Naphthalini resublimat , 10 parts
Rad althææ pulv , 5 parts
Mucil gummi arab , q s
Ut fiant pilful 100
Dry without heating, and cover with elastic collodion
Sig Two or three pills three times daily

The remedy is especially useful in gastro intestinal catarrh The advantage of the collodion coating is in the fact that it is dissolved in the intestine and not in the stomach, and that no unpleasant taste is experienced from eructations For the success of the collodion coating it is essential that the pills be carefully dried before its application —*Deutsche Amerikanische Apotheker-Zeitung*, June, 15, 1887

MARINE SALT IN ANÆMIA —HEGAR has used hypodermatic injections of a 6 1000 solution of marine salt, pure and recrystallized, with good results in anæmia The condition of the circulation was improved, as was shown by sphygmographic tracings —*Revue de Therapeutique*, August, 1887

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, OCTOBER 15, 1887

THE NINTH INTERNATIONAL MEDICAL CONGRESS

That the many readers of THE JOURNAL may know the real character and success of the recent International Medical Congress in Washington, we copy the following leading article from the London *Lancet* of September 24, 1887, pp 617 and 627 Certainly no higher or more impartial authority could be invoked *The Lancet* says

"The success of the Ninth International Medical Congress is a matter for thankfulness The interruption of the series of Congresses would have been little less than a calamity and a disgrace for the profession in all nations Any serious imperfection in the meeting, either as respects numbers or the character of the discussions, would have been but little less unfortunate But the Congress has been held under most honorable auspices, the famous hospitality of the United States has been fully realized, and those who went great distances to attend the Congress have been amply rewarded, and will return to their various countries and duties with higher impressions of their calling and deeper convictions of its progress, both on its scientific and its medical side We cannot but rejoice that our own country was well represented in many of the Sections, the names of many well-known English physicians and surgeons will have been noticed in the reports which were received by cable from our special correspondents at Washington We confess that we read the report of the concluding proceedings of the Congress with the most pleasurable emotions, and not least the remarks of the English members A break down of the Congress in Washington would have been only a less acute pain to us than a break down in London And we accept the concluding speeches of our countrymen and of our *confrères* of Berlin and Paris, Dr Martin and Dr Landolt, and others, as proof that the Congress has been worthy of its predecessors, that it contained a larger gathering of foreign members than any of them, and that it is calculated to promote the advancement of our art Those in the United States who have worked to this end, in spite of much discouragement, well deserve the gratitude which was accorded to them by formal resolution We have purposely abstained, in our allusions to the Congress, from pointedly referring to the domestic differences among our brethren in the States, which threatened to seriously mar the success of the Congress, if not to prevent it altogether Those who persevered in spite of all opposition, and who have carried through the Congress so successfully, may well be satisfied They have done a great service to their country and to their profession in all countries It is not necessary for us to say that they committed no faults and made no mistakes Such praise is not for mortals in a world so full of 'spilt saltpetre' as ours But they have carried through the Congress, and we thank them There is yet one other service they can do in any official action that now devolves upon them, to strive to obliterate the last relics of discord, and to hand on the light of truth and charity, undimmed and unqualified, to those in Berlin on whom will now rest the burden of responsibility for the next Congress They can well afford to be magnanimous, and to help to make the representation of the States at Berlin so complete as to bear no traces of recent divisions

"The scientific value of the addresses and papers read at the recent Congress cannot be estimated till we have seen them in full On the whole, judging from abstracts of the papers and discussions, we are inclined to say that they have been practical rather than theoretical, and have had reference to useful rather than transcendental aspects of medicine Neither, so far, have we met with much indication of original matter in the papers But this is no dispraise It was meet that in the most practical nation in the world papers and discussions should take a practical turn, and deal with questions at their practical point No branch of medicine can be said to have been neglected, from that which deals with the brain to that which deals with the risks of decayed teeth, including, by the way, several instructive cases of pyæmia The statistics of vaccination were much advanced in a paper by Dr Josef Korosi, Director of Communal Statistics of Buda Pesth (to which we hope to make more special reference), and other questions of Public Medicine were made subjects of interesting discussion Every branch of medicine was well represented—notably the ophthalmic, the gynecological, and the dermatological, so that we venture to forecast that the volumes of the Transaction Reports will have considerable practical importance

"Notwithstanding that the City of Washington is, like most other cities, liable to suffer an annual desertion by the most influential part of its population during the early autumn, the ninth meeting of the International Medical Congress has been one of the most successful of its kind We shall not err in saying that as a social undertaking merely, without regard to its professional aspect, this transatlantic

gathering holds a place not second in importance to anything of a similar character that has happened, or is likely soon to happen, on this or that side of the dividing ocean As an assemblage of medical practitioners and teachers met together with a common purpose of comparing and correcting the results of observation and invention, of devising new plans for future investigation, and of applying new modes of treatment in the art of healing, its significance is equally remarkable With the single exception of London, no European capital has attracted so many representatives of medicine and surgery since the International movement first originated Successful in point of numbers, the conference has not been less successful in possessing in more than one particular a thoroughly representative quality It has been in the widest sense International Almost every civilized people, besides races which might by courtesy be included in the same category, have contributed towards its membership The four continents have given of the skill which is available for the treatment of disease in their civil practice, the military and naval services have subscribed each its quota of men and of material for discussion Again, as regards the subject matter, it is almost superfluous to point out the illustrative diversities of study by which the sum of medicine can be viewed as through so many windows, and to state that each of these has received its full share of recognition in the working programme of the Congress Last, but not least, the whole business and pleasure of this meeting have been administered with a cordial good fellowship truly representative of that spirit of hospitality which happily characterizes the American people and annually admits to the privileges of free citizenship strangers out of every country without distinction President Cleveland and his assessors in the work of Government have been foremost in showing attention to the American practitioners and their guests Not only have they taken an active part in the extra professional work of the Congress, but it is through their influence that Government buildings have been on several occasions available for social gatherings of the members We are happy to recall the fact that in so doing they have but revived the precedents afforded by the conduct of other States, but we appreciate no less on that account the warmth of their generous consideration Nor must we forget to offer an equal tribute of esteem to the American medical press, and to those citizens of Washington who distinguished themselves by affording a similarly handsome hospitality "

Inasmuch as the International Medical Congress of Washington has passed and been freely awarded a high and honorable position with its predecessors by the medical press of other countries, we desire to add only an earnest hope that the medical press of this country will accept the gratifying result, and instead of nursing old prejudices or seeking for imperfections and errors, to which all human beings are liable, will henceforth labor for the unity and advancement of the profession as a whole, and to secure an American representation in the International Medical Congress of 1890, at Berlin, as intelligent and honorable as came from the other side of the Atlantic to Washington in the Congress of 1887

THE CLAIMS OF MEDICINE

A year ago one of our contemporaries spoke of the "Students' Numbers" of the English weeklies as "unmitigated nuisances " They can be so regarded only by those who do not earnestly desire a reform in medical teaching It would be well if every physician, every student, and especially every teacher of medicine in this country, could read these "educational numbers" each year and study in them the English system of medical instruction In England —or we should say, in the United Kingdom—medical study is practically under the regulation of the Government In this country the General Government does not concern itself with medical education, and where there is any governmental regulation or supervision it is that of a State

In the United Kingdom no person is allowed to register as a medical student (and every medical student must be registered) unless he has previously passed, at one or more examinations, in 1 English language, including grammar and composition 2 Latin, including grammar and translation 3 Elements of mathematics 4 Elementary mechanics of solids and fluids 5 One of the following optional subjects Greek, French, German, Italian, or any other modern language, logic, botany, zoology, or elementary chemistry The commencement of the course of professional study is never recognized as dating earlier than 15 days before the date of registration The registration of students is under the charge of the "Branch" Registrars, who keep a full record of the students registered A "Medical Students' Register" is made up and sent each year to the Registrar of the General Medical Council by each Branch Registrar, and this Register is printed and sent to each medical school and hospital

In regard to professional education and examination the General Medical Council recommends that the course of medical study after registration should occupy at least 5 years, if the subjects of elementary physics, chemistry, and biology be included in that period, or at least 4 years if a satisfactory examination in these subjects has been passed previous to registration It is also recommended that at least 4 winter and 3 summer sessions should be passed at a school or schools recognized by the licensing bodies of the United Kingdom At least 3 professional ex-

aminations are recommended "In no case should the examination of a candidate in any subject be conducted exclusively by his teachers in that subject in the school in which he has been educated" "Every candidate for the *final* professional examination should be required to give evidence that he has had sufficient opportunities of practical study, with care of patients, medical, surgical and obstetrical, in hospital, dispensary or elsewhere" With regard to this it may be said that proof that a candidate has had opportunities is not proof that he has availed himself of them

It is said that the profession is more esteemed and looked up to in Great Britain than in this country Is not one reason of this the fact that the British public knows that the medical man must have spent a certain amount of time, and that a long time, in the study of his profession, while in this country the public knows that men are graduated from many medical schools with insufficient qualifications, and after, in some cases, absurdly short periods of study? In Great Britain a medical title is a guarantee of something definite, in America such is not the case, unless one takes the trouble to find out where the individual was graduated—and this the public will not do Laymen are, like professional men, critical, and take much more kindly to assertions which are accompanied and supported by reasons Is there any wonder that the public sometimes questions the vastness of medical science when so many claim to have mastered its principles in two winter sessions? Medical men should not only see to it that members of the profession are properly educated, but that the public is also educated in regard to the real meaning of medicine as an art and a science

We have thus far only outlined the *professional* mental demands of medicine There are also other claims of the profession upon its members A medical man who knows nothing but medicine is very apt to be a one-sided character Medicine demands at least something of general culture An educated physician, like any other educated man, should know "something of everything, and everything of something" The knowing everything of something should be the *work*, the vocation, the finding out something of everything should be the amusement, the recreation, the avocation By regular habits, regular hours (or as regular as possible) and an equable distribution of work and exercise one need not look forward always to summer at the seaside for rest, recreation and amusement Idleness and inactivity are medicines for sick people, but poisons to healthy bodies and minds

Medicine has also certain distinct claims upon those who teach by their writings In this age of much writing and many books, he who would have his writings on professional subjects read must avoid prolixity and verbosity, and state facts and ideas in the shortest and fewest words possible And this leads us to say that the physician who would have some definite mental recreation, and one that will be of real service to him and others, cannot find a more varied or interesting subject than the study of English composition and style, and with this may be recommended the study of modern languages, the value of which is apparent Modern medicine demands that the members of the profession keep pace with her advances, and this they cannot do if they are dependent upon translations for a knowledge of what is being done in other lands

ANTIPYRIN IN ACUTE BRONCHITIS OF CHILDREN

For some months innumerable articles have appeared in current medical literature discussing the physiological and therapeutic action of antipyrin That the drug has a wide range of usefulness is an undoubted fact and yet many practitioners who welcomed it gladly at first are now regarding it with some suspicion because of the occasional toxic effects that they observe from it and with some misgivings because of the failure to obtain expected results from its use There is little doubt but that the drug will obtain a permanent place in therapeutics but we need much more exact information in regard to the indications for its use It is surprising, as FRIEDLANDER points out in a late number of the *Therapeutische Monatshefte*, that among so many articles describing the action of the drug so few have appeared which consider its usefulness in diseases of children Friedlander has observed with care the indications by which the usefulness of the drug can be gauged in individual cases of acute bronchitis in children It is just such observations that are needed to enable the physician to use medicines to the best advantage He says that before using antipyrin he lost many children who were attacked with this disease and its duration was from two to three weeks Since using it the mortality has been wonderfully diminished and the average duration reduced to one week

If the cases of bronchitis are classified according to their amenability to antipyrin two groups must be formed, the first embracing those that are most benefited by the drug, and the second those that receive little aid from it The first group embraces those

who have a temperature of 104° F (40° C) and who are well nourished, the second those that have a moderate temperature, 102° F (39° C), or less, and who are not well nourished Both classes are aided by antipyrin treatment, but the former much more so, as is shown by the following statistics Friedlander says that in a recent severe epidemic of acute bronchitis among children in his neighborhood, he, as well as his fellow physicians, lost 50 per cent of their patients but since he has used the antipyrin treatment he has lost none of his patients belonging to the first category, and the duration of their illness has averaged not more than a week, and the percentage of loss in the second category is reduced to 10 He suggests that the reason why the drug does not apparently accomplish as much good in weak children is because they are not able to withstand its unpleasant side effects, such as the profuse sweating that it induces Usually after the administration of a dose the little patients break out in a profuse perspiration, the temperature falls, they sleep for an hour or so and awake with a feeling of well being The cough is usually looser, and the breathing easier The dosage recommended is for children under 5 and over 2 years, 12 or 13 grains (0 9 gms) Its effect will continue for from 12 to 15 hours and therefore two doses must be given daily To a child 2 years old, or less, 7 grains (0 5 gms) may be given, but only one dose will be needed in the 24 hours During convalescence one-half of the above mentioned quantities are given at a time The treatment of acute bronchitis among children by antipyrin as recommended by Friedlander does not exclude the simultaneous use of expectorants

CONCEPTION AFTER CURETTEMENT

In Pippingskold's clinic the operation of curetting the uterus for fungous endometritis was done 60 times during the years 1872 to 1885 HEINRICIUS reports (*Centralblatt fur Gynakologie*, No 25, 1887) that in 25 of these cases parturition seems to have been the cause of the hæmorrhage, and of these 15 became pregnant after the operation, 5 of the 15 being under 30 years of age, 8 under 40, and only 2 over 40 Of the remainder 1 was a widow 39 years old, 7 were over 40, and the age of 1 patient unknown Of 35 patients in whose cases parturition played no part in the causation of the disease, 1 died, and information is wanting in regard to 6 Of the remaining 28 only 1 became pregnant after operation Most of these patients were approaching the climacteric In 17 cases functional disturbances of the ovaries were the causes of the disease, in the opinion of Heinricius Of the 52 patients whose histories are known 16, or 30 per cent, became pregnant after curetting In 2 cases pregnancy began 5 weeks after the operation, and in 1 case in 8 weeks In his private practice Heinricius has had 1 patient who became pregnant 4 weeks after the operation

TRANSACTIONS OF THE NINTH INTERNATIONAL MEDICAL CONGRESS —The Executive Committee while in session in Washington adopted the following resolutions that may be of interest to many of our readers

"*Resolved*, That all papers read, and the manuscript reports of all discussions, and all illustrations, must be handed in to the Secretary General *before* November 1, 1887, in order to secure a place in the Transactions

"*Resolved*, That notice be given that the *price* of the Transactions shall be fixed at $10, to those persons desiring to purchase, and that such persons be requested to send their names, with the amount, not later than November 1, to Dr E S F Arnold, Newport, Rhode Island, the Treasurer "

GLEDITSCHINE, not Stenocarpine, is the proper name of the new local anæsthetic mentioned editorially in THE JOURNAL of September 17 The *Gleditschia triacanthos*, or thorny locust is the tree from which it is obtained

SOCIETY PROCEEDINGS

AMERICAN GYNÆCOLOGICAL SOCIETY

The twelfth annual meeting of the American Gynæcological Society was held in the Hall of the Academy of Medicine, New York, September 13, 14 and 15, 1887

FIRST DAY—MORNING SESSION

The Society was called to order by the President, Dr A J C Skene, of Brooklyn

An Address of Welcome was delivered by Dr Fordyce Barker, of New York

DR THOMAS ADDIS EMMET, of New York, read a paper entitled

A STUDY OF THE CAUSES AND TREATMENT OF UTERINE DISPLACEMENT

Version cannot be regarded as the disease It is but a symptom If we examine a woman suffering with prolapse, the pulsation of some branch of the cervical artery can be readily detected When the uterus is raised to the health line a sense of relief is

felt, and if it be held there for a few minutes the pulsation ceases If, however, the uterus is raised beyond this point, distress is again experienced Anteversion is certainly not an abnormal position Retroversion to a marked degree is frequently detected through accident where it has not given rise to the least inconvenience With reference to the causes, he wished to refer to the influence of pelvic inflammation in inducing displacement The only fixed point is in front of the neck of the bladder where the sub pubic ligament binds down the urethra Any traction on this point leads to irritation and a desire to empty the bladder This often results from inflammatory adhesions The uterus may be retro flexed or anteflexed, but the traction will be upon the urethra Prolapse is the more usual consequence of pelvic inflammation, resulting from the increased weight due to the obstructed circulation The degree of displacement is usually in proportion to the extent of the cellulitis The effect of peritonitis involving Douglass' cul de sac is to raise the uterus, while versions always result from pelvic cellulitis In cases where the inflammation is confined to the utero sacral ligaments there will be anteversion

In a case of backward displacement the uterus is usually comparatively free, so that the displacement can be corrected with the finger If the organ be held in what is supposed to be its correct position, pulsation will soon be detected in some of the neighboring vessels If a pessary be introduced under these circumstances it will soon be necessary to remove it In extreme anteversion, the displacement cannot be corrected by means of any instrument without making traction upon the utero sacral ligaments, and if this is done inflammation will be the result In the treatment of cases of displacement the result of inflammation the general practitioner should not resort to pessaries, but should, if treatment is necessary, apply iodine, use cotton and glycerine pads and order hot water injections

The pelvic circulation presents certain peculiarities In no other part of the body can so much blood be received in case of disease The veins are without valves, and their course must be tortuous in order to overcome the force of gravity The author had observed that if the uterus be drawn down to the floor of the pelvis and held there, the cervix and vaginal tissue become congested as the result of obstruction of the venous circulation If, however, the traction be increased until complete procidentia is induced, the tissues become blanched as a result of the narrowness of the arteries from the traction

The whole skill in the use of the pessary consists in constructing it of such size and shape that while it relieves the prolapse it will just dispose of the overstretching The relief is not dependent entirely upon relief of the version Its effect is indirect, consisting in the relief of congestion The speaker had also used cotton saturated with glycerine to lift the uterus The quantity used was never more than sufficient to correct the prolapse If a large quantity is employed, it is liable to cause irritation The profitable range for the use of pessaries is not extensive If not employed with great caution and judgment, the effects to the patient may be very serious He believed that nothing can take the place of pessaries when properly fitted and used in the proper class of cases He thought that their field of usefulness was more limited than is generally supposed The displacement should not be corrected on its own account nor until the history of the case has been ascertained No attempt should be made to correct the displacement so long as any evidences of recent inflammation are present In tracing the histories of a large number of women, no instance of permanent cure has been found from the use of pessaries, in cases where there was reason to believe that previous inflammation had complicated the case

Dr Grailly Hewitt, of London, said that the subject of displacements of the uterus had occupied his attention for a considerable period There seems to be a difference between American and English women with reference to the frequency of cellulitis He had not found this complication in a large number of cases of uterine displacement The question of the general causes of displacement is very important The speaker has attributed the sufferings of the patient to pressure by exudation He has not alluded to a point which Dr Hewitt considers important, and that was that the flexure in the uterus interferes with the circulation and causes pressure upon the nerves To this cause he would attribute a large part of the pain Simple straightening of the uterus relieves the discomfort In cases of acute flexion where the sound has been used in the treatment, when the instrument reaches the internal os, this part is found excessively sensitive By completing the introduction and straightening the uterus, the tenderness disappears within 24 hours and does not return

There was something more to be said with reference to the use of pessaries when there is no pelvic cellulitis He agreed that pessaries should not be used if there is acute congestion present, but that there may be cases in which there is contraction and hardness associated with displacement in which pessaries may be very valuable in leading to absorption of the exudation The pessary must, of course, be fitted carefully and properly applied

Prof A R Simpson, of Edinburgh, remarked that it had been suggested that there must be a difference between the females of America and of England with reference to pelvic cellulitis He thought that the difference was more with the mind of the individual who examines these cases The same woman going to several different observers might get a different opinion from each He agreed with Dr Hewitt that the author had not taken a very large view of uterine displacements He seemed to confine himself to the results of inflammation and to displacements occurring in women who had had children We also have displacements occurring in women who have been married two or three years and have not conceived In some of these cases we have inflammation, and this is not to be overlooked Even after we have done all that we could in the way of relieving the inflammation, it is necessary to put the uterus in proper position to fit it for impregnation

DR G BANFOCK, of London, was unable to agree with the author with reference to the frequency of pelvic inflammation Experience is teaching us that pelvic inflammation is less common than we have generally supposed Many of the cases regarded as pelvic cellulitis have been instances where the inflammation was confined to the Fallopian tubes or the peritoneum lining Douglass' cul de sac, and especially the peritoneum covering the Fallopian tubes He had not seen the utility of paying so much attention to the causes of displacement In a case of a broken arm we do not inquire particularly as to the exact manner in which the injury was received So in cases of displacement of the uterus, we need not trouble ourselves with regard to the cause of the trouble The patient comes to be relieved and we proceed to relieve her as best we can His experience was that in the majority of cases perfect and permanent relief can be afforded by the proper use of the pessary The proper adjustment of the instrument is the whole secret After confinement, where there is retroversion, he recommends, where the uterus is not adherent, replacement by the sound and a pessary properly applied Where there is much tenderness it is not desirable to at once apply the pessary, but the congestion should first be relieved Where adhesions have formed the use of the pessary must be set aside altogether

DR T A EMMET, of New York, said the causes of displacement of the uterus are many, and most of them are well known His object was to call particular attention to one class of cases which are overlooked and which are complicated with inflammatory troubles, which will not be discovered unless an examination by the rectum is made This is the reason there is such a diversity of opinion There is no one who uses pessaries more than he does, and in the majority of cases pessaries should be used and nothing else can be used, but there is a class of cases in which the use of pessaries is improper As regards the frequency of pelvic inflammation, he believed that it was less common abroad than in America Our young women go into society earlier and they contract pelvic inflammation as a result of imprudence in dress He had found the effects of pelvic inflammation more commonly among the unmarried than among the married

DR SAMUEL C BUSEY, of Washington, read a paper on

CYSTOCOLPOCELE COMPLICATING LABOR AND PREGNANCY

This term is applied to the prolapse of the bladder into the vaginal passage The prolapse may be partial or complete It may occur anteriorly or laterally It is well known that distension of the bladder frequently complicates labor, but the subject of cystocolpocele has not received much attention It is a rare accident, and when present often overlooked The author had been able to find six reported cases of cystocolpocele complicating pregnancy Where the distended bladder can be detected externally, there is no difficulty, but where the prolapse is into the vagina, many of the cases are doubtless regarded as cases of threatened abortion The speaker reported the following case occurring in his practice

November 24, 1886, he was called to see a woman in the ninth month of pregnancy It was thought that labor had commenced The pains recurred at short intervals The finger in the vagina at once came in contact with a distended pouch The os could not be felt and no presenting part could be discovered It was learned that no urine had been passed since the previous day With the finger of one hand in the vagina while percussion was made upon the pubes, distinct pulsation was observed It was then concluded that the case was one of distended bladder prolapsed into the vagina The patient was then assisted by the nurse to the commode and passed a large quantity of urine The tumor at once disappeared, the cervix could be reached and labor had not begun In this case vesical tenesmus was not present

Cases of cystocolpocele complicating labor, although rare, are more numerous than cases of the same condition complicating pregnancy The author had found 37 such cases recorded Mistakes in diagnosis have often been made, and on several occasions the bladder has been punctured under the impression that it was the amniotic sac

The condition is usually accompanied with pains somewhat like those of labor, but unaccompanied with any progress towards expulsion of the fœtus In some cases there is complete retention of urine with frequent desire to empty the bladder More frequently there is a scanty discharge of urine with vesical tenesmus If the prolapse is partial and the organ empty, a firm hard mass marked with sugar will be found If the bladder is completely prolapsed and partially or completely filled with urine, there is an absence of vesical intumescence above the pubes and a tumor will be felt in the vagina, completely closing the vaginal canal The finger can be swept over the lateral and posterior portions of the tumor, but not in front Where the prolapse is anterior, labor cannot be completed until the urine is removed The only certain sign of this affection is the discharge of urine through the urethra and the subsidence of the swelling

DR WILLIAM GOODELL, of Philadelphia, had met with two cases of this condition, one a few days before labor and the other during labor In the first case he found a body as large as the child's head and as hard There was severe vesical tenesmus He could not pass the finger behind the tumor and there was no evidence of an os uteri Further examination showed the swelling to be due to the distended bladder A catheter was readily introduced and relieved the swelling There was no return of the trouble The other example of this condition occurred in a case of antero posterior contraction of the pelvis The pain was very great, but the cause of the difficulty was soon recognized It was impossible to introduce either the soft or the metallic catheter He then put on the forceps, and raised the head so that the catheter could be passed in The labor was then completed with the forceps

AFTERNOON SESSION

DR WM M POLK, of New York, read a paper entitled

IS SALPINGITIS TO BE TREATED BY EXTIRPATION OF THE TUBES AND OVARIES IN ALL CASES?

By salpingitis the speaker meant that disorder whose most marked clinical symptom is found in the presence of the peruterine masses so commonly met with in palpating the pelvic contents The most common result of this condition is displacement of the tubes The author had already made a report on 100 cases of salpingitis In 50 of these cases the abdomen was opened and in 50 no section was made, but in these a comparison of the results of careful examination left no doubt that the whole series of 100 cases represented the same disease The majority of cases of salpingitis recover Even where a small quantity of pus is present this may be encapsuled by lymph and do no harm Some of the cases remain as confirmed invalids, while a few die Outside of the puerperal condition the death rate is low, and including antiseptic midwifery the death rate is still low The main symptom observed was dysmenorrhœa

An examination of the cases coming under the author's observation led him to believe that the chief cause of the symptoms in many cases was the presence of adhesions He had operated, removing the adhesions, but allowing the tubes and ovaries to remain, on the ground that although pregnancy might not occur, yet as their removal was unnecessary, mutilation could be avoided and one of the objections to the operation removed The question whether or not the adhesions will reform must be answered by experience The author reported eight cases operated on in this way In one case there was shortened utero sacral ligaments, the posterior face of the uterus touching the rectum The ligament was stretched, a drainage tube inserted and the patient did well She had suffered for a long time from dysmenorrhœa and pain during coition, and other evidences of so called cellulitis or chronic salpingitis In the second case the uterus was retroverted and bound down by adhesions These were torn, the tubes and ovaries loosened and the uterus held forward by Alexander's operation, the object being to displace the uterus from the old position and prevent the formation of new adhesions Within proper limits the extirpation of the uterus and ovaries is a valuable operation It is, however, desirable to confine it within its narrowest limits, and where it is possible to avoid mutilation, to do so

DR A MARTIN, of Berlin, said that progress can only be made in this important matter by distinguishing between the different forms of disease of these organs In only a small number of cases is the tube the seat of a neoplasm He had found only one case of carcinoma of the tube The most frequent disease of the tubes is catarrhal inflammation, extending from the uterus We frequently see it following the puerperal state It has often been supposed that the salpingitis was of gonorrhœal origin, but only in a few instances have the gonococci been found in the tubes In most cases, the disease of the tubes is a benign affection, a catarrh which increases the size of the tube and may give rise to hæmorrhage, particularly at the time of menstruation, and occasionally to pyo salpinx Frequently, early occlusion of the tube is the result

Only a small number of the 250 cases coming under his observation had required operation As in most cases the disease is a simple catarrh, we must first institute treatment adapted to the simple nature of the affection If we do not succeed in relieving the symptoms and reducing the size of the tube, we are to operate He had done eighteen operations for disease of the tube, but very seldom did the tube give him the occasion for the operation Generally it was the spread of the disease to the other pelvic organs, particularly the ovaries In many cases there was abscess of the ovaries This severe complication is not observed with sufficient frequency as to warrant operations in all cases of salpingitis He had lost about 12 per cent He never performs the operation except where there is a distinct tumor In nearly all of these cases there was severe peritonitis In the majority of cases we can cure these patients by general treatment

DR T A EMMET, of New York, held much the same views as Dr Martin A large number of these cases can be cured by careful general treatment, and it is our duty to operate in no case until the woman has had an opportunity to see whether or not she can get well without operation When the disease of the tube is unquestionably of gonorrhœal origin, the operation may be resorted to at once He was satisfied that two thirds or more of the cases operated on to day, will not be operated on five years from this time

DR WILLIAM GOODELL, of Philadelphia, agreed in a large part with what Dr Martin had said His rule is to try in the majority of cases the effect of rest treatment, with general and local medication It seemed to him that the author of the paper gives us an operation more dangerous than the removal of the ovaries What objection is there after the abdomen is opened to the removal of the ovaries and tubes? This is not a mutilation, they are unable to perform their function Rather than resort to a second operation, such as Alexander's, he favored the removal of the tubes and ovaries In cases of malposition of the uterus, associated with disease of the tubes and ovaries, he had frequently righted the uterus by introducing a pessary at the time the ovaries and tubes have been removed and keeping it in during the process of recovery

DR G BANTOCK, of London, remarked that the question which has been proposed may be answered in the negative Ordinary cases of salpingitis due to catarrh can be cured by rest and constitutional treatment When it comes to pyo salpinx and hæmato salpinx the conditions are different A well marked case of pyo salpinx, whether due to catarrh or to gonorrhœal infection, will require operative treatment He had, however, seen tubes which evidently had contained a large quantity of pus, but which when examined contained only a small quan-

tity of cheesy matter It is rare to have death from the rupture of a pyo salpinx In hæmato salpinx the condition is far more serious than in pyo salpinx

About one year ago, he had under treatment a case of fibroid tumor of the uterus The patient suffered a great deal of pain and he was induced to operate When the brim of the pelvis was reached the adhesions were so numerous that he could not proceed He therefore determined to remove the ovaries and bring about the menopause The left ovary was removed without difficulty, but the right ovary could not be found Fluid was detected in the right side and an incision showed that there was a fibroid tumor which had undergone cystic degeneration The edges of the cavity were stitched to the abdominal wall, a large opening being left to facilitate drainage In three months the patient was quite well She subsequently married and a short time ago was delivered of a living child It is therefore clear that when the mischief arises from the outside of the tube, sterility does not necessarily result When, however, the inflammation begins inside, sterility will probably be induced With reference to the procedure suggested of loosening adhesions and allowing the tubes and ovaries to remain, he was inclined to think that that is not the correct treatment If the tubes and ovaries are so diseased as to require the removal of adhesions, he considers it proper to remove the tubes and ovaries also The effect of applying ligatures on each side of the uterus is to lift the organ into a more satisfactory position than can be done by Alexanders's operation

DR R S SUTTON, of Pittsburg agreed in the view of salpingitis that all cases should not be operated on, but if pus exists in the Fallopian tube it is our duty to evacuate that pus, just as it is our duty to evacuate a collection of pus in the arm No one has a right to allow a woman to go around with a pus sac ready to burst into the peritoneum, when he can remove it The condition of life of the patient must be considered A poor woman may require operation, while a rich one might be able to get along without operative measures

DR GILL WYLIE, of New York, said that in one thousand of his earlier cases of pelvic peritonitis and cellulitis, he operated about once in every ten cases In later years the proportion has increased Of his last sixty cases 60 per cent were for pyosalpinx, and all these cases have recovered He should not be willing to try the operation suggested by the author

DR WM M POLK, of New York, remarked that the question which he had considered was in regard to mutilation A woman has a right to her ovaries if they do her no harm Dr Bantock's case shows that the presence of adhesions is not a bar to pregnancy He thought that the removal of the tubes is a most important operation, but we must avoid extirpation of the tubes and ovaries unnecessarily

DR PAUL F MUNDE, of New York, read a paper on

DRAINAGE AFTER LAPAROTOMY

While drainage is an accepted procedure in general surgery, its position in abdominal surgery is not yet settled The author then quoted the opinions of various operators, showing the great diversity of views If antiseptics can prevent the decomposition of fluids left in the abdominal cavity the use of the tube can be dispensed with So long as there is any doubt as to this, so long, at least theoretically, will drainage be called for Some of the disadvantages connected with the use of the tube are, that the abdominal wound can not be completely closed, the danger of septic contamination through the tube, the liability to ventral hernia is increased, and there may occur serious reflex gastric irritation Whatever good is done by the drainage tube is probably accomplished within the first 24 hours As soon as the fluid which escapes is serous or serou sanguinolent the tube may be removed It has recently been recommended that in cases where it is found impossible to remove the whole tumor and a large cavity is left, a sac of iodoform gauze be made and packed into every crevice of the cavity This is then filled with narrow strips of iodoform gauze This the author had employed with satisfaction At the end of ten days the dressing was perfectly odorless

It was thought that when drainage seemed necessary the tube might be omitted, and the removal of fluids accomplished by an antiseptic gauze strip passed through the vaginal roof into the vagina This permits of the perfect closure of the abdominal incision

DR A MARTIN, of Berlin, does not employ drainage after ovariotomy, for the absorbing power of the peritoneum is so great that it can dispose of a considerable quantity of fluid He uses drainage in only a few conditions He uses it in amputation of the uterus through its neck, in vaginal hysterectomy, and where there are large surfaces of a sloughing character and large cavities left in the broad ligaments, as in extra uterine pregnancy, in large fibroid tumors which have been enucleated, and in large cystic tumors where all the surfaces can not be brought in contact In these cases he uses the drainage-tube passed through Douglass' cul de sac into the vagina

DR G BANTOCK, of London, said that so confident was he of the value of drainage that he uses it on the slightest provocation He uses it where there has been abundant adhesions and where it has been found impossible to completely dry the peritoneal cavity He uses it where the tumor has burst and it is impossible to remove all the contents In these cases he uses also large quantities of clean warm water He has given up everything in the form of antiseptics Since then his results have correspondingly improved In his last 104 ovariotomies he had lost three, and in the last 78 he had not lost one While he values the use of the tube, he did not think it was required in the majority of cases of ovariotomy He employs the ordinary straight drainage-tube introduced to the bottom of the wound It should be emptied every two or three hours This prevents any absorption of the effused fluids and the patient recovers without any elevation of temperature or any alteration in the pulse When the fluid

removed is nothing but plain serum, the tube may be taken away, but if it is removed before all blood has disappeared great risk is run

Dr Gill Wylie remarked that one of the advantages of the use of the tube has not been referred to, and that is that it gives us early information as to the occurrence of hæmorrhage

Dr Wm Goodell, of Philadelphia, said that he was not a believer in the drainage-tube, although he used it occasionally In three or four cases he had colloid cysts rupture three or four weeks before operation, and when the abdomen has been opened all the organs have been found covered with the colloid material These cases recovered without the use of the drainage-tube This was before the time of washing out of the abdomen In a recent case of the same kind he used a drainage tube, and not more than three ounces of fluid escaped He agreed with reference to the great value of the tube as showing the presence of hæmorrhage In one case a fæcal fistula occurred, and this he attributed to the presence of the tube

(To be concluded)

SUFFOLK DISTRICT MEDICAL SOCIETY

Section for Clinical Medicine, Pathology and Hygiene

Stated Meeting, May 11, 1887

Dr F I Knight, Chairman

Albert N Blodgett, M D, Secretary

(Concluded from page 476)

Dr F I Knight read a paper on

the contagiousness of tubercular disease of the lungs, with a report of one case

In July, 1885, a young lady of 19, came to my office with a history of cough of nine months duration I found signs of phthisis in one lung Her father was a very strong man, her mother had died of some nervous trouble after child birth There had been ten children, five of whom died in infancy, none of them with any brain or lung disease There had been also six half brothers and sisters, one of whom had died in infancy Of the uncles and aunts on both sides, only one uncle had died of phthisis The patient gradually declined, and died April 15, 1887 She was accompanied in her visits to my office by an older sister, 23 years of age, who had given up everything to attend to her This sister, while not robust looking appeared well, and said that she had always been so She occupied the same room and bed with her sister This I protested against, and advised her to go out regularly every day for walks in the fresh air The last record made of their visits to me was in the latter part of October, when the phthisical patient became too sick to come to me, and went under the care of her family physician in a neighboring city, she died, as I said, on the 15th of April On the 19th of April the sister came into my office with the following history She had continued to attend closely upon the invalid all winter, and had disregarded all my advice She had even slept with her sister up to within five weeks of her death She was with her night and day During the latter part of her sister's life her breath was so offensive that she could eat almost nothing, and only kept herself up by the free use of stimulants She stated that she had had a little dry, hacking cough for a month She breathed rapidly, but said there was no dyspnœa On examination her pulse was found to be 140 Temperature 104° On examination of the chest, subcrepitant rales were heard in both upper lobes, front and back, and the diagnosis of acute pulmonary tuberculosis was made Examinations, April 26 and May 3 confirmed the diagnosis On the 21st of May, she came to my office so weak that she had to be assisted from the carriage to the house She reported hæmoptysis of several months two weeks before She was so weak that I did not examine her chest Pulse, 160, temperature, 103 4° I did not see her again, and she died June 17, 1886, about two months after I first examined her, and three months after the beginning of the dry cough

Who can fail to believe that the disease and death of this patient was caused by attendance upon her sister? Hardly any one will deny this Admitting it, would she have succumbed to acute *pulmonary tuberculosis*, if she attended upon a sister ill with some other disease? As she had no such hereditary tendency I do not think so How often do we see patients worn out with much longer attendance upon the sick, and yet do not become tuberculous! And how often do we see strong women without the slightest herditary tendency succumb to attendance upon tuberculous patients

It is useless to allege in this connection, that ordinary attendance upon the sick in consumptive hospitals does not affect the attendants I admit this fact, but the attendance is not so prolonged, nor so close as in families Let any one who has doubt about the clinical evidence bearing upon this point read the little brochure of Webb The fact is that tuberculosis is so common with us, that we have almost ceased looking for the immediate cause in any case, especially if relationship gives us a chance to attach the blame to heredity I believe, however, that there are hundreds who have by inheritance that peculiarity of pulmonary soil which favors the development of the tubercular disease Who would not shun it unless they were brought into contact with those already affected? Whether all cases require such a transmission of germs we do not know

In what manner is it probable that the disease is communicated? It has been claimed that bacilli have been found in the breath, but it is, perhaps, more probable that the communication in most cases is by dried sputum, which becomes diffused in the atmosphere We have abundant proof that tuberculosis can be readily communicated to animals little liable to it, for example dogs, by causing them to inhale for an hour or two a day an atomized solution of the sputa of tuberculous patients (See

the experiments of Tappeiner and others in substantiation of this statement)

So then, I say that the appearance of tuberculosis of the lungs in countries where it was previously unknown, with the ingress of people from countries where it was common, the marked increase in the disease in the neighborhood of health stations resorted to by the tuberculous, the personal history of the development of cases in our midst, and experimental work with the sputa, all point strongly to the probable communication of the disease under favorable conditions, and make it not only incumbent upon us, in case of pulmonary tuberculosis in a family, to establish precautions against communication of the disease, but makes us criminally negligent in failing to do so

What precautions shall we take? These pertain (1) to the patient, (2) to the quarters he occupies, and (3) to the exposed attendant

The patient should be made careful in the disposal of his sputa, either to deposit them in a cup in which some germicide has been placed, or if the patient is feeble and obliged to use cloths let them be destroyed before any drying occurs It would hardly seem to be necessary to warn respectable patients not to spit about them carelessly, yet I have seen with respectable people the most utter indifference in this regard

For disinfection of the spit cups, Dr Ernst informs me that a 5 per cent solution of carbolic acid is the best Corrosive sublimate does not answer, as it coagulates mucin, and does not reach the bacilli at all

In regard to the room we should secure change of air by every known device, and as long as possible by a daily removal of the patient from his room, for the purpose of thorough ventilation Clothing and bed-linen should be frequently changed The absolute value of antiseptic sprays for the room in such cases we know not, and the use of those which are offensive in themselves should not be recommended But such as are pleasant to the patient and attendant would be of service at least in counteracting the disagreeable odor which attends the last stages of pulmonary disease

In regard to the exposed persons, let it be said that from the moment tubercular disease is discovered, another person should not occupy the same bed, not only for the sake of the exposed person, but also that of the patient, who will rest much more comfortably alone Sleeping in the same room should also be forbidden, as we seem to be more susceptible to all infectious diseases during sleep The attendant should have daily exercise in the open air, and if a relative, an occasional complete change, if possible In case of any failure in health, this should be insisted upon, and although the physician cannot always prevent self sacrifice on the part of friends, he can often modify it At any rate, he should not feel that relief of his patient was his only duty, but that his duty extended to the surroundings of his patient, and required that these should be arranged with due regard to the protection of relatives and friends

If there is any decided hereditary tendency to the disease, relatives should if possible, be prevented from any attendance upon the sick, and put at once upon proper hygiene

DR STUART When I was at the Carney Hospital I saw a case of a young lady, she was the step daughter of a consumptive who had just died, the question as to whether her mother died of phthisis could not be brought out The patient did not seem to know She was one of a family of eight brothers and sisters, all well, and she alone had evidence of phthisis According to this patients statement, while her step mother was sick for fourteen months she had hardly been out of the house Dr Devine, in speaking of the case, said he knew of a draw-tender who had buried two wives of phthisis, the draw-tender had the disease of course, himself, and the only conclusion which he could draw from this case was that the draw-tender was out in the open air almost all the time, while his successive wives were shut up in the house, and thus the course of the disease was made quicker for them

DR BLODGETT said that he could not refrain from calling attention to the fact in relation to tuberculosis, which is not sufficiently considered in the treatment of cases of this disease He was happy to observe that the chairman had laid stress upon the same point, which is the eminently infectious nature of tubercular disease There is no doubt that many cases of tuberculosis are communicated from one person to another, but the cases are not followed with that care which is everywhere thought desirable, even imperative, in relation to other infectious and contagious diseases The time has probably not yet arrived when we can test this class of diseases in the manner which would be applicable to other communicable diseases We are too much under the domain of public opinion to venture the rational and only real method of treatment which is directed to the peculiar character of the malady in question We can not properly utilize the knowledge which we already possess in relation to tuberculosis

In some foreign hospitals, patients with tuberculosis are treated in the same manner as are those with other dangerous disorders, that is, the sufferer from tuberculosis is segregated from other patients, and is isolated in a ward devoted to infectious diseases, where he is subjected to a rigid seclusion from the other sick to whom the disease might be communicated Much the same care and seclusion is exercised in relation to tuberculosis as is done with scarlet fever, measles, etc Dr Blodgett said that he had recently had a case under his own care in which the germicide treatment was adopted as one of the principal measures of relief, and in which there was an entire disappearance of all symptoms of disease The patient is the son of a clergyman, and is about 40 years old His father was for many years a sufferer from chronic pulmonary disease, and died after attacks of pulmonary hæmorrhage, presumably of tuberculosis The mother is still living, but has long been in feeble health The patient was never a strong man, but maintained his ordinary standard of health until five years ago, when he was the sub-

ject of fistula of the anus, for which he was under treatment by surgical measures for a year Since that time he has been somewhat feeble, and eighteen months ago he began to fail perceptibly Twelve months ago, he was under treatment for hoarseness, which advanced to a degree which rendered speaking above a whisper almost impossible At this time he came under the care of Dr Blodgett who found distinct ulceration of the larynx, with induration and impaired mobility of the vocal structures, and by microscopic examination the bacillus of tuberculosis was readily demonstrable The patient was at once placed under treatment by means of tonics, removal to the country, the use of antiseptic lotions and inhalations, principally of mercuric bichloride, the employment of which was rendered tolerable by means of antecedent applications of cocaine He passed some months on the sunny side of a hill selected with some care in New Hampshire, and late in the autumn returned to Boston He gave up his previous residence, and removed to the highest part of Newton, into a new house, on sandy and dry soil, where he has since resided He has steadily improved, his weight has increased from 122 pounds to 140 pounds He has never been so heavy as at present He is gaining strength, the voice has returned, and there is every reason for believing that the disease has entirely disappeared

It is true that this was probably not a case of *contagion*, but it is illustrative of the way in which a disease which is contagious should be looked upon It would, in all probability, have been perfectly possible for this patient's wife or child to have acquired the disease, by contagion He had constant attacks of bronchial or pulmonary irritability, frequent catarrhs, and recurrent periods of hoarseness and threatened pulmonary tuberculosis His system furnished a soil which was peculiarly adapted for the reception of such a disease

Dr Harold Williams remarked that when a student he had been taught by Dr Knight that phthisis pulmonalis was communicated by the sick to those in attendance upon them under certain conditions, and that in his practice he had never had occasion to change this view He had not come prepared to cite cases in proof of this doctrine, but could say that he had never doubted its truth, and that he had each year many cases which confirmed it both at the Boston Dispensary and elsewhere The two principal arguments against the view of contagion were *first*, that phthisis was the commonest disease in our community, one fifth of our people dying of it, and that cases of its supposed contagion were cases of coincidence This argument Dr Williams thought could be answered by saying that the reason of its frequency was because of its contagiousness, and the absence of sufficient precaution in protecting the well against the sick The second argument of the immunity of the attendants of phthisical patients in hospitals had been answered by Dr Knight Dr Williams not only believed phthisis to be contagious, but he believed the bacillus to be the element of contagion, and this had suggested to him that the well-known germicide properties of arsenic might account for the efficacy of this drug in phthisis, and that he was conducting some experiments to test this theory Since reading Jaccoud's book, in which the administration of arsenic is highly recommended, Dr Williams had employed it in several cases with good results, especially in one girl with phthisis of three months' standing, in which case its administration had been followed by complete recovery Dr Williams questioned if the good effects so strongly insisted upon by Jaccoud might not be due to the germicide properties of the drug, rather than to its action as a tonic, and as diminishing blood pressure and calming nervous irritability as claimed by Jaccoud

FOREIGN CORRESPONDENCE

LETTER FROM LONDON

(FROM OUR OWN CORRESPONDENT)

Ulexine—Papaw—Surgery for Nurses—Miner's Nystagmus—Funnel end Œsophageal Tubes—Prescription for Hay Fever and Summer Catarrh—Turpentine in Headache

With a degree of unconventional boldness which some will characterize as bordering upon audacity Mr E Harry Fenwick, the well known specialist in diseases of the urinary system, treated the students of St Peter's Hospital at a recent lecture, to a discourse of a very different kind to the ordinary run of "hospital lectures" The lecture in question included a succinct description of the more important properties of cocaine, kava kava, strophanthus, salix nigra, pinus sylvestris, lycopodium, etc, which Mr Fenwick has found exhibited by the respective drugs in his own actual practice The lecturer commenced by referring to the changes which had been introduced into our therapeutical practice of late years, and pointed out how much more had been done on the Continent than in England, although here we were in some respects well situated for obtaining raw material to work with, and also for the means of experimental study Mr Harry Fenwick concluded with a few remarks upon ulexine extracted by Gerard from the tops of the common furze or gorse, (ulex Europæns,) describing it as a strong respiratory poison Crucial experiments upon frogs shows that ulexine powerfully excites the urinary secretion, but the effect is transient Thus where the normal flow was three drops per minute but after two minutes this quickly retrograded to its original amount Somewhat similar effects were noted in the human subject, and it had been given with advantage in some instances, but in cases of long standing stricture of the urethra, doses of one-tenth grain had induced severe vomiting, with much pain, blackening of the tongue and other inconveniences, hence ulexine needed to be administered with caution With regard to papaw (carica papaya), the lecturer had successfully applied it for the softening and removing of diphtheritic membranes at the London Hospital, and he had found it of marvelous power in dislodging and bringing away renal stone, the pain being relieved in a very short time Papaaine was also used by him with advan-

tage in cases of dyspepsia, and in India it was employed as a remedy for tape worm, as it not only killed them more certainly than the oil of male fern but quickly dislodged and partly dissolved them

A small work by Mr Joseph Bell, dedicated to Florence Nightingale, and called "Notes on Surgery for Nurses," is quickly running through its first edition The author, who has for twelve years delivered lectures to the nursing staff of the Royal Infirmary at Edinburg, now publishes the pith of them in a concise form, which should be of service to those for whose benefit the lectures are intended The subjects dealt with include nearly all of those diseases in which the nurse plays an important part, and her duties in each case are fully explained In speaking of the necessity of cleanliness in all cases of ulceration the writer remarks "Ventilation of wards, cleanliness of floors, walls and bed linen, have helped, and it is now nearly a quarter of a century since I have seen a case of hospital gangrene"

Dr Charles Taylor of the Nottingham Eye Infirmary, speaking of miner's nystagmus, says that he does not consider it to be caused by, or accompanied with any lesion of the central nervous system, but in pure myopathy, analogous to that rare condition of the muscles of articulation known as auctioneers' spasm, or to writers', pianists' and telegraphists' cramp, or to similar affection of the gastrocenemic muscles occasionally observed in ballet dancers, who run on tiptoe until they are attacked by cramp, spasm and uncontrollable motions whenever they attempt to dance at all The extraordinary oscillation of the eyeball noticed in the subjects of nystagmus he considers to be due to the close connection which exists between the ciliary muscle and the internal rectus, may be developed in any muscles engaged in the effort at accommodation and is caused solely by the overtaxing of these organs The miner, surrounded by black objects, makes day after day, for years, a great and sustained effort to see in an imperfect light (especially imperfect when safety lamps are used) The muscles engaged in this continued strain are overtaxed, and in course of time give way, and at last, when called upon, become agitated and fluttered, escape from control of the will, and just as in the analogous case cited above perform irregular motions, so that, as miners express it "the lights dance," whenever they look at them

Mr Charters Symonds' short funnel ended tubes for wearing in the œsophagus in cases of cancerous growth, stricture, etc, have recently been used and found most successful in some of the London hospitals These are a great improvement on the old long tubes hanging out of the mouth, as they allow of the food being taken in the natural way, instead of the unpleasant mode of feeding by means of the funnel

Sufferers from hay fever and summer catarrh should make a note of the following recipe, given by Mr Martindale, of New Cavendish street, for smelling salts calculated to relieve these affections Absolute phenol 24 grains, carbonate of ammonia 16 grains, strong solution of ammonia 44 grains, oil of lavender 1½ grains, camphor 3 grains, pure sawdust 9 grains The author of the prescription speaks highly of the results he has obtained amongst his clients who have used it during the past summer

Turpentine in doses of 20 or 30 minims, it is said, will not only remove headache, but produce in a wonderful manner a soothing influence

G O M

DOMESTIC CORRESPONDENCE

STATEMENT OF THE SECRETARY-GENERAL IN RELATION TO THE MATTER OF ITALIAN DELEGATES AT THE INTERNATIONAL MEDICAL CONGRESS

On the 9th of November, 1886, I addressed a letter to Professor Mariano Semmola, of the University of Naples, requesting him to be present at the Congress, notifying him of his election as Vice-President, and asking him to deliver an address at the general session In response to this, Professor Semmola in accepting the invitation, replied under date of the 26th of November, 1886, as follows

NAPLES, November 26, 1886

Monsieur et tres honore Confrere

Je m'empresse de vous repondre par le retour du courier à votre aimable lettre du 9 courant Je vous remercie de l'honneur que vous me faites en m'appelant a une conference meeting et j'accepte bien volontiers cette charge Le subjet que je traiterai dans cette conference generale est le suivant La bacteriologie et la clinique therapeutique

Je vous prie en même temps de vouloir m'inscrire dans la Section de Medecine pour les travaux suivants

1 Nouvelles preuves experimentales et cliniques de l'origine dyscrosique de la Maladie de Bright

2 De l'ataxie paralytique du coeur d'origine bolboire

3 Contributions à la pathologie du sympathique

S'il le faudra j'aurai l'honneur d'envoyer au Secretariat general le resume ou les conclusions principales de ces travaux J'attends à ce propos des renseignements que vous pourriez avoir la bonte de me donner Veuillez agreer l'assurance de ma haute consideration Tres devoue,

[Signed] M SEMMOLA

He was therefore inscribed on the Register as a member of the Congress, and when the programme was issued, duly reported thereon as one of the gentlemen named to deliver a general address

On the 6th of June, following, the Baron Fava, the Italian Minister to Washington, addressed the following letter to Dr Dunglison, the Secretary of the Executive Committee

ITALIAN LEGATION, WASHINGTON, June 6th, 1887

Dear Sir—In reply to your esteemed favor of the 31st August last I beg to inform you that my government has appointed as its official delegates to attend the *Ninth* International Medical Congress, to be held in Washington in September next, the following gentlemen

Comm Professor Mariano Semmola, Senator of the Kingdom of Italy, and Dr Francesco Durante, Professor of the surgical clinic at the University of Rome

Believe me dear sir, with the best regards,

Very respectfully yours

[Signed] BARON FAVA
Italian Minister

As the letter was addressed to him, Dr Dunglison did not send the letter to me, but retained it until two days before the meeting of the Congress

On Saturday before the meeting, the question of preparing the preliminary programme was discussed

by the President of the Congress, the Chairman of the Executive Committee, and myself, and the programme was then prepared As there were two delegates from Italy it was concluded that, as Professor Semmola was to have the general address—considered by us all as one of the honors of the Congress—that the other delegate should be selected to deliver the address on behalf of Italy, in response to the speech of welcome of the Honorable T F Bayard, Secretary of State of the United States I verbally communicated this desire to Professor Durante on Wednesday evening, to which he assented as follows

RIGGS HOUSE, August 31, 1887

DR HAMILTON, S G U S M H S

Dear Sir —In response to your courteous invitation that I as the Representative of the Italian Government should answer the address of the Secretary of State of the U S have the honor to say that I accept with pleasure Respectfully,

[Signed,] FRANCESCO DURANTE

Professor Semmola had not up to this time arrived in Washington The morning papers of the following date contained a notice that Professor Durante had been so requested, and Professor Semmola, arriving in Washington on Sunday, he, with his Secretary called on me, in my office at the Riggs House, and stated that he, being a Senator of the Kingdom of Italy, felt it was his privilege to reply in an address of semi official character, and his Secretary stated to me that, if the demand were not complied with, Professor Semmola would withdraw from the Congress, and decline to deliver his address I immediately communicated with President Davis, and others of the Executive Committee, and it was decided that, as his claim seemed to be sustained by the wording of the letter of Baron Fava, that the programme could not be interfered with by declining to yield to Professor Semmola, and as it would materially interfere with the work of the Congress, and greatly embarrass the proceedings, I sought Professor Durante to explain to him that his invitation had been premature, and that the necessity of the case required that the Committee withdraw the verbal invitation tendered him to respond on behalf of Italy I was unable to find him on Sunday, or Sunday evening In the meantime Professor Semmola was informed that the Committee acceded to his request, and the following letter from him was received

WASHINGTON, September 5, 1887

Monsieur le Secretaire Général

Je viens vous remercier pour la justice que vous m'avez rendue et je garderai comme un des plus chers souvenirs de ma vie publique l'aimable mot que vous avez bien voulu m'addresser

Je vous prie Monsieur le Général, de vouloir faire inscrire mon nom parmi les members du Congrès, aussi bien que les noms de mes deux Secretaries Mr Robert O Wickersham et Monsieur le Marquis Lanza

Je vous prie d'agréer mes sinceres expressions de devoument

[Signed,] PROF M SEMMOLA

Professor Durante, unfortunately, was not communicated with till the next morning, when he appeared in my office I stated to him, and his Secretary, Dr Tricomi, in substance, as follows

Professor Francesco Durante, etc

My Dear Sir —When I asked you on yesterday to make for us a short reply to the address of welcome by our Hon Mr Bayard, Secretary of State, I was unaware at that time that my Senator from Italy was present It seems that Professor Semmola of your great country is also a Senator, and as such he desires to respond on behalf of the country It appears that the precedents of other Congresses be in this direction Thus at the International Anthropological Congress, at Lisbon, Senators Gozzadini and Mantegazza were called upon in a similar capacity Therefore we are under the necessity of extending this Senatorial privilege to Professor Semmola

They withdrew from the room, and I received the following letter

RIGGS HOUSE, September 5, 1887

General Secretary of the Medical Congress

Sir —Having been invited by the Secretary General of the Medical Congress, Surgeon General Hamilton, to answer in the name of my country the address of the Secretary of State, I accepted with pleasure and so informed by letter the Secretary General My surprise was therefore great and painful when this morning while inquiring about the order of exercises at the opening of the Congress the same Surgeon General Hamilton informed me that he had requested Dr Semmola, of Naples, to make the answer This change was done without my knowledge and consent and was therefore an insult

I am the Representative of the Italian Government inasmuch as I was so delegated by the Minister of Public Instructions, the only Minister that has authority to make such an appointment Professor Semmola's appointment is not from the Government but from one Minister, that of the Interior, as an expression of personal regard The plea that Dr Semmola is a Senator of the Kingdom should not be considered in this matter, as this is a medical and not a political Congress In view of the foregoing and of the personal affront, I hereby withdraw from the Medical Congress aforesaid Respectfully,

[Signed,] PROF FRANCESCO DURANTE

This letter was simultaneously published in the daily press of the city

I was then called upon by Dr T S Verdi, of this city, who inquired into the circumstances, to whom I related the foregoing, as nearly as possible He then retired, and in the meantime returned saying he had seen Professor Durante and thought the matter could be explained satisfactorily if I would sign a letter, which he produced, and which appears on the first page of *Il Progresso Italo-Americano*, New York, September, 10, 1887 I did not sign the memorandum which he presented to me as appears in this paper, but re wrote it The words as translated in *The Progresso*, are as follows "Grandamente mi dolgo che ho ceduto alla domanda del Prof Semmola e spero che Ella, come Vice Presidente del Congresso, vorrà continuare ad aiutarci col suo consiglio e conla sua esperienza, rimendo con noi," were not used by me, but I said I greatly regret the *circumstances*, etc , meaning thereby that I regretted any controversy should have arisen, as the Committee only desired to promote harmony in the Congress and between the delegates He then demanded of me, through Professor Verdi, that I should say to him exactly what had been said by Professor Semmola that induced the Committee to change the invitation to Professor Durante, which I did in a letter which is probably correctly translated in the paper of the name and date as above given

No disrespect was intended to either of the delegates to the Congress at any stage of the proceedings, and, in regard to the address of Professor Semmola, the Committee were abundantly satisfied and delighted with both the subject matter of the address

and the manner in which it was delivered, and in yielding to Professor Semmola's request to deliver the address of welcome to the Secretary of State they simply desired to carry out the proprieties of the occasion, and to compliment Italy If, however, any injustice has been done any individual, or ill feeling has resulted, they are sincerely sorry, and can only regret the circumstance

J B HAMILTON, M D,
Sec -Gen'l International Medical Congress

LETTER FROM NEW YORK

(FROM OUR OWN CORRESPONDENT)

Annual Meeting of New York State Medical Association—Discussions on the Management of Compound Dislocations of the Ankle-Joint—The Origin, Nature, Complications, Sequelæ and Treatment of Typhoid Fever, etc —Opening of the College of Physicians and Surgeons of New York, in the New Building

The last week in September was a very busy and pleasant one in the medical world of New York The fourth annual meeting of the State Association was held on the 27th, 28th and 29th, at the Hotel Brunswick, Madison Square, which proved a much more comfortable and attractive place for the purpose than the somewhat lugubrious and dreary Lyric Hall, on Sixth Avenue, where the Association met last year The attendance was good, and the proceedings characterized by much interest The distinctive feature of devoting the greater part of the afternoon sessions to set discussions on topics of general medical and surgical importance, which has proved so useful and attractive in the past, was retained with admirable results the present session, and the subject of the first day's discussion was the management of compound dislocations of the ankle-joint, which was opened by the distinguished surgeon, Dr Edward M Moore, of Rochester, the last President of the Association, and participated in by Drs Joseph D Bryant and Frederic S Dennis, of this city, U C Lynde, of Buffalo, Frederick Hyde, of the University of Syracuse, and Charles W Brown, of Elmira The second day's discussion was on the origin, nature, complications, sequelæ and treatment of typhoid fever, which was opened by the accomplished and erudite Dr Alfred L Carroll, of Staten Island, recently Secretary of the State Board of Health, and participated in by Professor Edward G Janeway, of Bellevue, Hermann M Biggs, of the Carnegie Laboratory, E D Ferguson, Secretary of the Association, Charles A Leale, ex-President of the New York County Medical Association, and others The special question, "Is there a disease of the lower animals transmissible to man as typhoid fever?" was discussed by D E Salmon, D V S, of Washington, D C, R S Huidekoper, of Philadelphia, and James Law, F R V S, of Tompkins County, New York The third and last day's discussion, on placenta prævia, was opened by Dr George Tucker Harrison, for many years one of the well-known surgeons of the Woman's Hospital, and participated in by Dr Isaac E Taylor, President of the Association, Professors T Gaillard Thomas and William T Lusk, Drs John Shrady, of New York, Darwin Colvin, of Wayne County, William H Robb, of Montgomery County, and others On the evening of September 28 demonstrations in pathology were given at the Carnegie Laboratory, under the direction of Professor Janeway, and on that of the 29th the annual banquet was held

On the 29th of September the new buildings of the College of Physicians and Surgeons were inaugurated with appropriate ceremonies They are situated on West Fifty ninth street, just opposite the Roosevelt Hospital, and are, of course, models of convenience and equipped with all the most approved appliances for the successful study of both the science and the art of medicine The college proper consists of a southern wing, measuring 140 by 43 feet, along Fifty-ninth street, a northern wing, 76 by 43 feet, along Sixtieth Street, and a middle portion, 96 by 55 feet, connecting the other two The southern wing contains the administrative department, with conversation, reading, working, and "bone" rooms On the second and third floors are the museum, professors' recitation and demonstration rooms, the physiological laboratories, and the Swift Physiological Cabinet The top floor, lighted entirely from above, is devoted wholly to work upon the cadaver The main featurre is the public dissecting-room, lighted in the evening by the electric light, and containing 36 tables, at which 180 students can dissect at once About this room are grouped smaller apartments for private dissection, for the teaching of operative surgery upon the cadaver, and for the preparation of material to illustrate the lectures on anatomy and surgery The northern portion of the building is nearly all devoted to laboratories of various kinds, and in the middle building are the two large lecture rooms of the College, one of which will accommodate 450 students, and the other, the amphitheatre, more than 450 students The remaining space is taken up with work-rooms in the various departments

The Vanderbilt Clinic, at Sixtieth street and Tenth avenue, is connected with the College building by a covered passage-way It was built, and the site provided, by the sons of the late Mr Vanderbilt, as a memorial of their father, and in it is afforded a fully equipped dispensary service for the sick poor It contains also a theatre for clinical lectures and small rooms for instruction and physical examinations The Sloane Maternity Hospital is at Fifty-ninth street and Tenth avenue, and provides ample facilities for the practical study of obstetrics It is a lying-in hospital, with 30 beds, given by Wm D Sloane, whose wife, a daughter of Wm H Vanderbilt, has made its beds free in perpetuity

The inauguration exercises took place in one of the large lecture-rooms, and when they were about to commence the President, Board of Trustees, and Faculty marched down the aisle and took seats on the platform The Vanderbilt family was represented by Messrs Cornelius and George Vanderbilt, and among the distinguished men present, not belonging to the medical profession, were President Barnard, of Columbia College, President Gilman, of

the Johns Hopkins University, Professor Dwight, of the Columbia Law School, Judge Gilbert M Speir, and the Hon Chauncey M Depew After prayer by the Rev Dr Weston, Chaplain of the College, the President, Dr John C Dalton, delivered an address mainly devoted to the past history of the College of Physicians and Surgeons, which was founded in 1807, with Nicholas Romeyn as its first President The first lectures were given in a building on what is now Park Place, and it was not until fifty years after it had been started that the institution became the medical department of Columbia College

The inaugural address was to have been delivered by Joseph H Choate, Esq , of the Board of Trustees, but, owing to illness in his family, he was unable to be present, and his place was taken by Prof Wm H Draper, who also presented a large bust of Wm H Vanderbilt, the gift of the Trustees and Faculty, and busts of the late Drs Hosack and Mitchell, and Dr John C Dalton, the present President of the College

In the evening a festival alumni dinner in honor of the inauguration was held at Delmonico's, at which were present about 200 medical men On this occasion Dr C R. Agnew, who is one of the Board of Trustees, presided, and speeches were made by Chauncey M Depew, Cornelius Vanderbilt, the Rev Dr John Hall, Dr William Pepper, Provost of the University of Pennsylvania, and others

The community was recently somewhat startled by the arrival at this port of a steamship from Naples with 8 cases of Asiatic cholera on board, and on which 8 other persons had died of the disease during the voyage The proper measures were at once taken by the quarantine authorities, however, and there is little likelihood of the cholera's gaining a foothold in the city The 8 patients were transported to the hospital on Swinburne Island, where 2 of them subsequently died, and the remaining passengers were taken to Hoffman Island, where they will be retained until all danger of their communicating the disease is over Since their removal to the island two or three other cases have developed among them

P B P

THE FAUCIAL METHOD OF INTRODUCING THE EUSTACHIAN CATHETER

Dear Sir —Catheterization of the Eustachian tube, which occupies so prominent a place in diagnosis and treatment of the diseases of the ear, when attempted in the ordinary way, is not always as satisfactory as the simplicity of the maneuver would indicate

Recently, in the case of an adult who sought relief for distressing tinnitus with deafness, the deflection of the septum was such that the route by the floor of the nostril proved quite painful, and finally unsuccessful, from the fact that she felt the column of air arrested before it reached the middle ear The use of the Politzer bag not furnishing better results, it occurred to me that with the aid of the rhinoscopic mirror and giving the catheter a sufficient curve, I could succeed by the direction of the fauces

The method proved satisfactory and is not painful I found it also available on account of excessive sensibility in cases of rhinitis with deafness It is not so ready a method as that by the nose in patients that present themselves for the first time, but it would seem to have a useful place

In looking over the available literature, I found that Dr Buck alludes to Dr Pomeroy's faucial Eustachian Catheter, and disapproves of its employment without giving reasons Dr Buck's work, Wood's Library Series, bears the date of 1880, a date, prior, I think, to the present extended employment of cocaine, the local use of which obviates reflex spasm and undue sensibility, conditions that would otherwise be in the way of its employment

CHARLES ENFIELD, M D

Jefferson, In , Oct 4, 1887

PUBIC DISLOCATION OF THIGH, With Fracture of Rim of Acetabulum

Sir —June 9, 1887, J D 's horse while in full speed fell on bridge, dragging J D 20 feet with right hip and leg under the horse I found outward dislocation of patella and pubic dislocation of thigh, accomplished reduction with distinct crepitus While waiting for subsidence of effects of chloroform the limb became dislocated by muscular contraction into thyroid foraman, replaced again, after remaining in place few minutes became displaced again This was repeated several times Finally retained it in place by pelvic bandage and compresses anterior and posterior to great trochanter Bandage removed July 1 On July 10, through severe muscular spasm, thigh became dislocated again Dr C S W and myself succeeded in accomplishing the reduction with same result as in the former reduction, finally retaining it in place with the bandage and compresses July 11, excessive vomiting and depression set in, with paralysis of left arm and right foot, with paralysis of sensation along entire extent of external popliteal nerve Under use of arsenic and electricity arm and leg recovered, foot remains permanently paralyzed Passive motion of hip is gradually restoring its function Length of limbs equal

A S KINNAMAN

Homerville, O

NECROLOGY.

WILLIAM A BYRD, M D

The Adams County Medical Society places this minute upon its records in memory of Dr William A Byrd deceased August 14, 1887 Dr Byrd was born in Both Co , Va , in 1843 Graduating at the Missouri Medical College in February, 1867, his professional career covered a period of just twenty years, eighteen of which he was a member of this Society He was a student of untiring industry and large capacity for endurance, and gave himself unsparingly and with real enthusiasm to the work of

his profession With a natural aptitude for surgery he early devoted himself especially to that branch, and became noted for his boldness, operative skill and fertility of resource

The publication of improved methods and devices adopted by him in operations upon the colon, and on the use of wire in ununited fractures, but especially the former, attracted wide attention, gained him recognition in the American Medical Association, and gave him honorable standing in the International Medical Congress at its meeting in London In the year 1885–6 he was president of the Illinois State Medical Society Dr Byrd became a member of the Adams County Medical Society in May, 1869, was elected president in 1874 and again in 1877 The period of his membership in this society corresponds to its busiest and most fruitful years, and we recognize the fact that for this fruitful activity much is due, not only to the large part personally borne by Dr Byrd in its professional work, but to the stimulating influence of his example upon his fellows C W R

JONATHAN LEONARD, M D

Jonathan Leonard, M D, was born in Sandwich, Mass, January 7, 1805, and died at his home in Sandwich January 29, 1882 His father, Dr Jonathan Leonard, was a physician of long and successful practice, and the son early became interested in the science of medicine He graduated from the Harvard Medical School in 1828, and soon after commenced practice with his father He removed to Boston in 1836 Notwithstanding the advantages of the city, a life in the country was more congenial to his tastes, a love of nature being a strong element of his character, and in a few years he returned to Sandwich for the remainder of his life-work Dr Leonard became a member of the Massachusetts Medical Society in 1831 A close student, and thoroughly devoted to his profession, he soon became widely known as a skilful physician and a wise counselor in all difficult cases His good judgment, delicacy and gentlemanly bearing, made him invaluable in his profession and gave him the confidence of the community He joined the American Medical Association in 1849 He was thoroughly good in his life, pure in his motives, refined in his tastes, tender sympathies, and charitable in his judgment He was deeply interested in all that pertained to the welfare of his native town, particularly its educational interests In his religious views he was broad and liberal, was always a generous contributor to that branch of the Christian Church whose teachings were in harmony with his own thought His last illness was extremely painful, but retaining his consciousness to the last, he bore his sufferings with fortitude and implicit trust in God He was married twice, December 31, 1834, to Alice C Babcock, daughter of Samuel H Babcock, of Boston, and March 31, 1878, to Mrs Mary T Jarvis, daughter of C C P Waterman, of Sandwich, who, with a daughter by the first marriage and a son by the second, resides upon the old homestead in Sandwich

MISCELLANEOUS.

MEDICAL SOCIETY OF VIRGINIA —The eighteenth annual session of this Society will be held in Richmond on October 18, 19, and 20 There will be a general discussion on "Choice of Anæsthetics"

NEW BOOKS RECEIVED

Transactions of the Medical and Chirurgical Faculty of the State of Maryland, Eighty Ninth Annual Session, held at Baltimore, Md, April, 1887

The Principles of Antiseptic Methods Applied to Obstetric Practice By Dr Paul Bar Translated by H D Fry, M D Philadelphia P Blakiston, Son & Co

Pulmonary Consumption, its Etiology, Pathology and Treatment, with an Analysis of 1,000 Cases By C J B Williams and Charles T Williams Second Edition, enlarged and rewritten by Dr C T Williams, with Colored Plates Philadelphia P Blakiston, Son & Co

Handbook of Gynæcological Operations By A H G Doran Philadelphia P Blakiston, Son & Co

Surgery, Its Theory and Practice By William J Walsham Philadelphia P Blakiston, Son & Co

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM OCTOBER 1 1887, TO OCTOBER 7, 1887

Capt E C Carter, Asst Surgeon, leave of absence further extended fifteen days S O 231, A G O, October 4, 1887

First Lieut J M Cabell, Asst Surgeon, relieved from further duty in connection with the competition of "Team of Distinguished Marksmen," Bellevue Rifle Range, to take effect October 1, and will return to his station, Ft Omaha, Neb S O 95, Dept Platte, September 27, 1887

First Lieut J M Cabell, Asst Surgeon, will be relieved from duty at Ft Omaha, Neb, assigned to temporary duty with Battalion Sixth Infantry, in the field

First Lieut W C Borden, Asst Surgeon, will be relieved by officer commanding troops, upon arrival of Asst Surgeon Cabell, and will return to his station at Ft Douglas, Utah S O 98, Dept Platte, October 1, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING OCTOBER 8, 1887

Asst Surgeon Wm Martin, detached from hospital, Norfolk, and granted sixty days' leave

Medical Inspector N L Bates, detached from Naval Dispensary, and to Examining and Retiring Board

Surgeon A F Price, ordered to the Naval Dispensary, Washington, D C

Surgeon J R Waggener, ordered to the receiving ship "Minnesota"

Surgeon Paul F tzsimmons, detached from "Minnesota" and to "Marion" October 15, 1887

Asst Surgeon Louis W Atlee, detached from receiving ship "Vermont," and to the "Marion" Oct 15, 1887

P A Surgeon W H Rush, detached from coast survey str "Blake," and to the Navy Yard, New York

Asst Surgeon T A Berryhill, detached from "Minnesota" and to the "Blake"

Surgeon M C Drennan, detached from Naval Academy, and wait orders

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDING OCTOBER 8, 1887

P A Surgeon Fairfax Irwin, granted leave of absence for twenty five days October 5, 1887

P A Surgeon John Guitéras, granted leave of absence for seven days September 28, 1887

Asst Surgeon Seaton Norman, upon expiration of leave of absence to rejoin station, New York October 4, 1887

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ORIGINAL ARTICLES.

RUPTURE OF THE UTERUS

Read before the Section on Obstetrics and Gynecology, at the Thirty eighth Annual Meeting of the American Medical Association, June, 1887

BY WM H WATHEN, M D,

OF LOUISVILLE PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN IN THE KENTUCKY SCHOOL OF MEDICINE EX PRESIDENT OF KENTUCKY STATE MEDICAL SOCIETY CONSULTING GYNECOLOGIST TO THE LOUISVILLE CITY HOSPITAL, ETC

The uterus ruptures only once in three or four thousand cases of labor, and many physicians of large experience have never seen a case, but it is so fatal in its results, that all cases, successful or otherwise, should be reported to enable us to form more accurate conclusions as to the best means of preventing the injury, or of saving the life of the woman after it has occurred

Rupture of the uterus cannot always be anticipated, but in pelvic deformities, or unusual obstructions to natural delivery, as pelvic or uterine tumors, rigidity of the os, bands in the vagina, hydrocephalus of the child, and malpositions and deformities of the child, or in inordinate uterine action, cicatrices in the uterus from former wounds, and in previous disease or weakening of the walls, there is danger of rupture, which may be prevented But the time allotted me will not admit of an extended notice of this subject in detail, so I must confine myself to the report of an interesting and fatal case that recently came under my observation, and conclude with a few suggestions as to the proper treatment when the uterus is ruptured On Saturday, February 19, at 2 30 P M, I was called in consultation with Drs McDermott and Roberts to a Mrs Mack in her tenth labor, with the following history 35 years old, had always enjoyed good health, had been married fifteen years, and had given birth to nine living children without complications or difficulty At 9 P M Friday, February 11, she felt feeble labor pains and sent for a midwife The pains continued at long intervals until next morning, when the membranes ruptured and contractions stopped She continued to go about and to manage her domestic affairs until 9 P M, February 18, when she began to have feeble pains, but did not send for a doctor or midwife At 11 P M her husband retired and heard no complaint from his wife until 12 30 A M February 19 She called for assistance, but did not appear to be suffering intense pain Uterine contractions immediately ceased, and when the doctor reached her an hour later she was in profound collapse, nearly pulseless, with limbs cold to the trunk In an examination at 2 30 A M, I found the fœtal head lying loosely at the pelvic brim, with the body in the abdominal cavity, and the uterus contracted down to the right inguinal region The limbs were distinctly felt through the abdominal walls Bleeding had ceased, and there did not appear to be much blood in the peritoneal cavity Her condition precluded the possibility of immediate delivery, and her husband would not consent to any operation until he could consult her spiritual advisor We gave stimulants and applied several jugs of hot water about the woman We left her at 4 30 A M with instructions to call us immediately, if any improvement was noticed We did not expect her to live long, and were not a little surprised at 7 A M to find her improved, pulse better, and getting warm We suggested abdominal section, but were told that her husband, who had gone for a minister, had left positive instructions that no operation should be performed in his absence He did not return for an hour, and then her condition was as bad as when I first saw her

With a desire that the woman should not die undelivered, we finally got consent to remove the child *per vias naturales* Having given her ether and whiskey hypodermically, I delivered her with little effort of a dead child, and removed the placenta, without causing further laceration, hæmorrhage or shock After replacing a bunch of intestines that had prolapsed through the rent into the vagina, the laceration was carefully examined It was immediately on the left side of the uterus, extending through the walls from the os externum to the middle of the fundus, splitting the organ half into, leaving the severed edges widely separated The lacerated surfaces were rounded, and there was an absence of physical conditions which characterize rupture in normal uterine tissue, indicating inflammation, ulceration, or fatty degeneration A compress was put on the abdomen, and a binder applied to hold the torn edges together and prevent protrusion of the intestines She died in a few hours, but as a necropsy was not permitted we could not verify the condition of the uterine tissues, though I am sure the laceration was due to some form of metritis, or to fatty degeneration She had taken no ergot, and the contractions were too weak to have ruptured healthy tissues I doubt if we

could have saved the life of this woman by any treatment, but had she been seen immediately after the rupture Porro's operation would have been indicated, for had the torn edges been sutured after Sanger's method union could not have resulted

In view of the recent remarkable achievement in abdominal surgery, and recognizing the almost universal fatality in rupture of the uterus treated by expectancy after the removal of the child by forceps or version, I am surprised to find some well known medical writers and many good practitioners and surgeons, who refuse to recognize abdominal section as the best and safest treatment Of course, the operation is not indicated in incomplete rupture where the peritoneal covering of the uterus is not torn, for in these cases neither blood, bloody serum, or liquor amnii has entered the peritoneal cavity to decompose and cause septicæmia, etc But if the rupture is through the walls, abdominal section is the only rational treatment, and should be done, though the child may not have entered the abdominal cavity, or may have been delivered the operation has few additional dangers, and removes many If the discharges in the peritoneal cavity are carefully removed before decomposition or inflammation, the patient may have no untoward symptom from this cause They may be perfectly wiped away, and the cavities of the abdomen, uterus and vagina may be made aseptic by irrigation with warm antiseptic water

Porro's operation, and the improved Cæsarean section, are the only operations indicated in uterine rupture, the former being preferable in nearly all cases, as it is usually impossible to approximate the torn edges of the rent so as to get perfect union, and if the blood or lochia enter the peritoneal cavity it will cause inflammation and septicæmia, and result in the death of the woman But where the uterine tissue is normal, and the rent even and regular, Sanger's Cæsarean section may be selected Porro's operation is especially indicated in all cases in which there is retention of tissue elements in fatty degeneration due to malnutrition, or in retention of elements or substances that would empoison the blood, such as gangrene, putrid fœtus, etc The success in the improved Cæsarean section where the uterus is not ruptured has been encouraging There are reports of 39 operations with 12 deaths, a mortality of 30 77 per cent If we exclude 5 cases performed as a *dernier ressort* in the United States when the women were exhausted, we have 34 operations, with 27 recoveries and 7 deaths a mortality of 20 59 per cent

In Créde's analysis of 26 cases we have 19 recoveries and 7 deaths, a mortality of 26 67 per cent, but in 3 of these cases septic infection existed before labor, in 2 grave cases it occurred during labor, and in 2 cases the patients died of other complications There are 23 reported operations in Germany and Austria, with 19 recoveries and 4 deaths, a mortality of 17 4 per cent, but not a single death is referable to the operation In 16 operations performed in the Maternity Hospital of Leipsic and the Dresden Maternity Hospital, by Sanger, Oberman, Donát, Leopold and Cohn, there were 15 recoveries and 1 death, a mortality of 6 25 per cent , all the children were saved Lawson Tait proposes to reduce the mortality to 5 per cent in the Porro operation We cannot expect these good results in operations where the uterus is ruptured, but if the woman is not in profound shock, and her condition is relatively good, timely abdominal sections should result in a success of 75 per cent The danger is not so much from the operation itself, the mischief being already done by rending of the uterine tissues and hæmorrhage into the peritoneal cavity, and the profound shock of the nervous system will be exaggerated by further hæmorrhage The operation should be done immediately, for if performed as a *dernier ressort* we must not expect success All the pathological changes are against the late operation, for in the absence of shock, adventitious sacs, plastic adhesions, etc , will have formed, will prove troublesome, and will prevent success

In conclusion, I beg to suggest for your consideration, the substitution of some form of abdominal section for embryotomy in all cases where the child is living I have only alluded in this general way to a few prominent points, hoping to elicit discussion by the members familiar with these questions

DISCUSSION

DR W E CALDWELL, Freeport, Ill In about twenty years I have only lost one patient from this cause This woman had been delivered several times by instruments I was called to her after the membranes had been ruptured for about twelve hours The rupture of the uterus occurred in a few moments after my arrival at the house, and as the woman was *in extremis* I rapidly performed abdominal section with the hope of saving the child, but in that I failed That is all of my experience in regard to rupture of the womb It has been my lot to see Cæsarean section performed six or seven times, and in all of the cases I have seen the women recovered The modern manner of performing the operation is by the entire removal of the uterus I think no good operators at the present day leave the uterus in I think in the case just given, if the doctor had been allowed to operate promptly, he could have done so with a fair prospect of saving the mother, if not the child

DR DELASKIE MILLER, Chicago I desire to ask one or two questions of Professor Wathen before I say anything on the subject I failed to fix the dates of the rupture of the membrane and the rupture of the uterus?

DR WATHEN The membranes ruptured about ten hours after the woman began in labor, and the pains ceased The uterus ruptured about one week subsequent to that date, there were no uterine pains in the interval, nor had she taken ergot or anything of that kind In reply to further questions, Dr Wathen said No one knows the condition of the child during this interval, when I first saw the patient the child was dead and the os was torn entirely through

DR MILLER The case is most interesting, and to my mind illustrates the effect of indecisive action in the management of cases, for want of knowledge

I have no doubt that many cases of rupture of the uterus would occur if cases were left to nature, and assuming, with the author of the paper, that there is a diseased condition of the uterus, this is to be apprehended If there is softening of the wall of the uterus from fatty degeneration or the result of inflammatory action, it is most natural for the wall of the uterus to give way if a limited portion of the organ contracts normally, and rupture will result The point I wish to call attention to is this When labor has commenced and has proceeded so far that the membranes have ruptured, and the contraction of the uterus ceases, it is the duty of the accoucheur to interfere then and assist nature to accomplish the delivery You may say the os uteri is not fully dilated Then it is his duty to dilate it by proper means and effect a delivery I would apprehend in the condition described that there was some abnormal condition present in the seat of the uterus and that some serious complication was to be feared I would anticipate this and effect a delivery Allow me to say what I would do before the rupture takes place, in my own management I not infrequently attend cases of labor where the contractions continue and the patient suffers from severe pain Many times these contractions, although not efficient in inducing dilatation of the os uteri are so severe as to cause the patient agonizing pain These are frequently located in a circumscribed portion of the uterus and I apprehend that some serious complication may be impending When I meet with a case of that kind where the pain is unusually severe I invariably assist nature in effecting a delivery If the inferior segment of the uterus has been dilated and thinned out and the uterus continues to contract actively there is danger of rupture and I would at once adopt measures to produce full and sufficient dilatation of the os uteri and to assist delivery I believe that I have frequently saved patients from this terrible complication of labor by prompt artificial delivery I think the case reported very interesting I am happy to say, since the question has been propounded, that in my individual practice I have never met with a case of rupture of the uterus It has been my fortune to see two cases, which have confirmed the position I have taken, in both cases I believe the rupture was due to delay in active interference If you will allow me a moment I will give in brief the details of a case of a medical man in this city who obtained his medical education in foreign countries, and therefore we would suppose was qualified for the practice In this connection I would say that between the gentleman and myself the warmest feelings of friendship exist This doctor was called at 2 o'clock in the morning to attend a woman in labor He visited the woman immediately and upon examination found the os uteri partially dilated and the uterus contracting regularly, he left her, promising to return in three hours When he returned he found dilatation increased considerably but not quite complete The contractions of the uterus were attended with considerable suffering, but he believed in not interfering too actively in the processes of nature, and left his patient, saying he would come back in two hours, but fifteen minutes before he returned rupture had taken place and the patient was in collapse and did not recover Who does not believe that at his second visit if he had applied the forceps, as he could have done, the patient would have been saved?

DR JOHN MORRIS, Baltimore, Md I have listened to the paper with a great deal of interest I have seen two, perhaps three cases of rupture of the uterus in my experience Dr Wathen says there is great difficulty in the diagnosis There is no doubt great difficulty in foreseeing complications of this kind, but no primipara has ever ruptured the uterus—I do not believe any lady or gentleman in the audience has ever seen, heard or read of a rupture in a primipara It generally occurs in women who have borne eight to ten children If you are called to attend a woman over 40, who has borne eight or nine children, that woman is liable to this trouble If in that labor she has great pain and uses involuntary struggles amounting to violence—for frequently I have seen Irish women do violence to themselves in their effort to expel the child—then interference is necessary You must give large doses of opium and restrain the labor This rarely occurs in women who have had only four or five children In these cases of rupture you are not called upon to make any interference to dilate the uterus, in these women the dilatation takes place very readily and the less interference you make to restrain labor the better That is my experience If you foresee this trouble, apply your forceps if you can Version should never be effected in a woman over 40 years of age, and no man should attempt version if he anticipates rupture of the uterus, he should apply the forceps or perform abdominal section I am convinced that in the case reported if abdominal section had been performed in the beginning that woman would have been saved, because she showed such powers of reaction, the extremities became warm and reaction took place With that reactionary power that the woman could have been saved by abdominal section seems to me the true theory and practice of obstetrics

DR H O MARCY, Boston, Mass It is only within three months that I have seen my first case of rupture of the uterus I will narrate it briefly because I think such cases should be put on record The woman was possibly 35 or 38 years of age, she had had several pregnancies, at the pregnancy prior to the one of which I speak she had lost her child and the physicians told her pretty definitely that she must never have another baby, but did not tell her why The doctor who was in attendance had watched her with care, the labor had gone on to a certain point uninterruptedly The membranes had ruptured—it was a breech presentation—and the breech was well down in the outlet, when suddenly the pain ceased I was sent for in consultation and this was the condition of things when I arrived Delivery was effected without a knowledge of the condition of the parts at the time and the child, which was a very large one, was given to me for resuscitation, which took place The woman was well cared for and everything was supposed to be satisfactory, the placenta came away and the parts were cared for, but within 24 hours

I saw this woman again in a state of collapse, temperature 103°, her pulse could not be counted, respiration about 40, abdomen swollen nearly as large as at delivery The introduction of the hand into the vagina carried two fingers into the retro-uterine pouch, there was a certain amount of prolapse of the intestines and the cavity was filled with clots of blood These were cleansed away and the uterus turned up through the cervix into the pouch of Douglas A long glass tube, such as is used in Vienna, was introduced into the uterus and irrigated very thoroughly with 1 2000 of bichloride of mercury, carried into the uterine rent in the base of the pelvis, and cotton dusted with iodoform was carried up into the vagina From that time she began to rally and at the end of two days was apparently in convalescence The case went on through a slow but very satisfactory convalescence and there can now be seen quite clearly a repair of the rent about 3 inches in length This is the only case I have seen that comes within the limit of the scope of the paper

SYMPATHETIC OPHTHALMIA

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY C M HOBBY, M D,
OF IOWA CITY, IOWA

The condition to which the term Sympathetic Ophthalmia is applied is well understood, and while the pure pathologist may object to the term, the clinician must still employ it, until a more scientific one is furnished Practically, the name is of little importance, but it is of great importance that we separate the differing conditions grouped under the name For example, ought the so-called sympathetic neuro-retinitis and the occasional lesions of the cornea, following disease or injury of the other eye, to be classed with the inflammations of the uveal tract, that make sympathetic ophthalmia so much to be dreaded?

The object of the present paper is to present the results of observation in a considerable number of cases of sympathetic ophthalmia, sympathetic irritation, and incidentally of severe traumatism My notes cover over 300 cases of traumatism, involving one or more of the tunics of the eye, excluding all cases of superficial injury, and foreign bodies failing to penetrate, from these I have gathered 35 cases, in which injury or disease of one eye has been followed by loss of the other, and in which the lesion of the first eye could rationally be supposed to have a causative relation to the destructive disease of the other Also, 36 cases in which enucleation was performed during sympathetic irritation or sympathetic ophthalmia Also notes of 67 additional preventive enucleations, among which were 5 cases in which trouble followed in the other eye There were 12 cases of enucleation made during panophthalmitis included in the above 67 All of the cases were under observation, at some time during their course, and all but 6 of the enucleations were made by myself

I shall only attempt to analyze these cases in reference to points of practical importance, and must necessarily omit much that would be of interest, especially the results of macroscopic and microscopic examination of enucleated eyes, which has been made in nearly every instance of enucleation during sympathetic ophthalmia or sympathetic irritation

Of the 35 cases in which sight was totally lost by sympathetic disease, 25 were males and 10 females Disease caused 6 cases, 3 males and 3 females, the right eye being primarily affected in 3 cases, the left in 3 Of the cases following traumatism, 29 in number, 22 were males and 7 females, in 17 the right eye was primarily affected, in 12 the left This is in correspondence with the generally recognized fact that males are more exposed to traumatism than females The right eye was the injured one in over 58 per cent of cases, and in general I have found that the right eye suffers more frequently from traumatisms than the left

The time elapsing from injury or loss of one eye by disease, to the occurrence of sympathetic ophthalmia or sympathetic irritation in its fellow, was noted with a reasonable approach to accuracy in 65 cases Of those that are classed as sympathetic ophthalmia, nearly all, probably, had a precedent stage of irritation, but in many the time of occurrence of this could not be ascertained, and the best obtainable data of manifestation of inflammation or failure of vision was used

22 manifested trouble in the second eye in less than a month from the time of injury or loss of vision of one eye by disease (disease playing a small part in these cases), of these 11 developed sympathetic ophthalmia, between 1 and 3 months 7 cases were noted, 4 of whom had sympathetic ophthalmia, between 3 months and 1 year 3 cases, 2 being cases of sympathetic ophthalmia, after 1 year 33 cases, 16 being cases of sympathetic ophthalmia

Weakening of accommodation, intolerance of light, and even hyperæmia of the conjunctival and episcleral vessels, so frequently follows in one eye serious injury of its fellow, that during the first two or three weeks after injury it is often difficult to determine whether sympathetic irritation, in its accepted sense, be present or not I have, however, included only those cases in which relief of pain and irritability of the injured eye was not followed by relief of the irritation of the other

The shortest time I have noted to elapse between injury and well-marked sympathetic ophthalmia was 2 weeks, the longest time 40 years I must, however, confess to some doubt as to the sympathetic nature of 3 cases in which vision began to fail from 20 to 40 years after injury, and in whom there existed no posterior synechiæ

Out of the 35 cases in which vision was lost in both eyes, most of them seen from 1 to 15 years after blindness ensued, the condition of the eye which had been destroyed by sympathetic ophthalmia was as follows In 20 posterior synechiæ, usually complete constituting exclusion of the pupil, were noted, in

2 the globe was atrophic, in 1 absolute glaucoma was the apparent result of traumatism of the other eye, in 1 the results of neuro retinitis were visible, in 3 staphyloma of the ciliary region existed, and in the remainder an opaque cornea, usually vascularized, forbid inspection In reference to sympathetic neuro retinitis I have notes of 5 cases that might be considered sympathetic in their origin, in only 1, however, was the blindness so great as to prevent counting fingers

Sympathetic ophthalmia, following enucleation, I have encountered 5 times

Case 1—J F, male, when seen æt 17, injured at 16 by explosion of gun, both eyes injured, the right hopelessly, the left eye retaining useful vision After 4 weeks, while very painful, the right eye was enucleated, later the left failed very rapidly Examination showed exclusion of pupil, opaque lens, and bare perception of light The only mark of traumatism was a small cicatrix near the lower margin of the cornea

Case 2—W H, male, æt 10 years, had had purulent conjunctivitis in the first year of life, resulting in serious lesion of left eye, which was enucleated, he says, when he was quite small At present the right eye shows occlusion of pupil, bare perception of light, no other lesion discoverable

Case 3—E F G, male, æt 9 Two weeks before he was first seen, he had received a wound from a knife, penetrating the sclerotic, on the inner side of the right eye, involving the posterior part of the ciliary body, for several days he had severe pain, which his physician sought to relieve by the application of bread and milk poultices When seen, the anterior chamber was filled with pus, the conjunctiva was œdematous, and the general appearance indicated panophthalmitis Beyond slight intolerance of light there was no indication of sympathetic irritation The eye was enucleated, the wound healed kindly, and he was allowed to return to his home in a week About one week later I received a letter from his father, stating that he had had severe pain, lasting an hour, over his left eye, and that since that his eye was watering Fearing danger, I telegraphed his father to come at once, and 3 days after the brief attack of pain I saw him The iris was then unyieldingly adherent to the lens, and pushed forward into the anterior chamber in the characteristic manner, from this time the case progressed without interruption to atrophy of the globe

Case 4—F W, male, seen at 60 years of age, the left eye was injured at 53 While the eye was inflamed and painful it was enucleated, shortly after the right eye began to fail When first seen the right eye presented chronic conjunctivitis, vascular pannus slight, anterior chamber shallow, complete posterior synechiæ, opaque lens, quantitative perception of light Vision $= \frac{2}{100}$ was obtained by extensive iridectomy, including all the adhesions, and extraction of the lens

Case 5—R Y, female, æt 53, when first seen had suffered from iritis of left eye, and had nearly complete posterior synechiæ, pupil occluded Iridectomy failed to improve vision, iritis frequently recurred, no view of fundus was ever obtained The right eye was normal The recurrence of iritis ceased, and after 2 months she returned home Warned of the danger to the other eye, and of the advisability of enucleation, during my absence from home 2 months later she visited, at my request, Dr H B Young, at Burlington, Iowa, who enucleated the eye, 2 months later I saw her and found that she was very much impressed with the idea that she was about to lose her other eye I found, however, vision normal, accommodation well performed, and not the slightest indication of trouble I reassured her, as strongly as possible, of safety, and she returned home, 9 months later she returned, with parenchymatous keratitis, increased tension, and several synechiæ From this time the case went rapidly down, exclusion of pupil being followed by infiltration of the cornea with opaque material, and I have since heard ultimate atrophy of globe

In 4 of the 5 cases it is strongly probable that suppurative inflammation of the uveal tract existed at the time of enucleation The former opinion, that suppurative inflammations of the interior of the globe diminished, if they did not entirely remove, the danger of sympathetic ophthalmia, has been recognized as erroneous, and at the last meeting of this Association, the majority of this Section apparently coincided in the opinion that enucleation was indicated during panophthalmitis, not only for the purpose of preventing sympathetic ophthalmia, but to preserve the patient from the suffering incident to prolonged suppuration The opinion was expressed that the risks attending enucleation during panophthalmitis were but little, if any greater than those attending enucleation under other circumstances

While Mauthner confesses that he still stands in awe of von Graefe's advice never to operate if the panophthalmitis be distinctly pronounced, yet he evidently believes that the risk has been greatly exaggerated by the experience and advice of von Graefe My observation leads to the belief that not only *fatal* results following enucleation during flagrant panophthalmitis are more frequent than our literature would indicate, but that prophylactic enucleation under such circumstances should be avoided for an additional reason, namely that during the activity of panophthalmitic inflammation, enucleation does not possess the prophylactic influence which we recognize as the paramount reason for removal of an eye

In reference to mortality following enucleation, there have been 2 cases within my immediate knowledge, both of whom at the time of operation had panophthalmitis, one case I reported in the *American Journal of Ophthalmology* (Vol III, p 141), the other case occurred but a few weeks ago in a town near by, the particulars of which I have been unable to obtain as yet It seems to me that the occurrence of greater fatality, when enucleation is made during panophthalmitis, and the additional probability suggested by the foregoing, that sympathetic ophthalmia follows enucleation during panophthalmitis much more frequently than it follows enucleation during all other pathological conditions, warrants postponing the operation, at least until

sympathetic irritation makes its appearance, then when the patient has all to gain, he can afford to stake his life against total blindness Sympathetic ophthalmia so rarely follows injuries of the cornea and anterior synechiæ that I am led to believe that the operation of iridodesis has fallen into undeserved neglect

The first and most important consideration in the management of patients in whom conditions liable to lead to sympathetic ophthalmia exist, is the means of preventing its occurrence It is unnecessary to go over the ground so ably traversed by Mauthner in his work upon "Sympathetic Diseases of the Eye" Excepting the small proportion of cases where foreign bodies can be successfully removed from the eye, and those cases where marginal iritic incarcerations can be released, the only preventive measure which, up to the present time, has demonstrated its value, is enucleation, and the question arises, When should preventive enucleation be resorted to? Mauthner, who is generally very clear upon this point, fails to give the lesion or lesions which, in his judgment, warrant preventive enucleation, and I believe interrogation of the lesion is essential to a rational conclusion

It is our duty to seek for the course, which will give the greatest amount of benefit to the largest possible proportion of patients If a certain procedure saved 50 per cent of the patients with a certain lesion from total blindness, but was accompanied with a mortality of 2 per cent ought it not to be adopted? This is a matter which we of course present to our patients for their consideration, but when our patients in turn leave the decision with us, we must accept the responsibility and act upon our best information

We must recognize that sympathetic ophthalmia does not, of necessity, follow any particular kind of injury, that a man may go through life with an eye rendered blind by invasion of a foreign body, or that the ciliary region may be punctured by an osage thorn, and an atrophic globe ensue, without the other eye suffering in the least, but we know that in 100 of such cases, uninterfered with, many would be found blind at the end of 12 years On the other hand punctures of the cornea, incarcerations of the iris in the cornea, traumatisms of the lens, or wounds of the sclera near the equator, while always carrying an element of danger with them, are not followed in any very great proportion of cases with lesion of the other eye Therefore, I believe the first indication for preventive enucleation is the presence of an inaccessible foreign body within the eye, or severe injury of the ciliary region of the globe, and that this indication exists, even if there be retained, to use Mauthner's language, "*a certain amount of vision*," and with me the "*certain amount*" would be *considerable*, if the patient had a piece of gun-cap within his eye, fortunately, however, for us and our patients too, useful vision rarely remains in the injured eye after injuries of this kind My belief in this position is rendered stronger by *Case 9*, related below, in which sympathetic iritis occurred without warning, and within 24 hours of careful examination

While the above applies to the condition immediately following the accident, I should regard the subsequent occurrence of panophthalmitis as a contra-indication to preventive enucleation, for the reasons given above So far as the other class of cases, where serious disease or injury exists, not involving the ciliary region, at least primarily, Mauthner's rule, which he makes, includes all dangerous cases, seems particularly applicable, he says "*My rule in such cases is as follows If the patient is* moderately intelligent, has good surroundings at his home, and can at any moment summon the counsel of a skilful oculist, preventive enucleation is not necessary" Unfortunately this rule in the United States covers only a small proportion of the cases, and is it not best then, in those cases where such surroundings are impossible, to always advise the removal of a hopelessly useless eye?

The diagnosis of sympathetic irritation, using the term technically, referring to a condition threatening the occurrence of sympathetic ophthalmia, and marked by weakened accommodation, lachrymation, photophobia, etc, is rendered difficult by the fact that the symptoms mentioned frequently follow trivial injuries, and may be developed in one eye by straining the accommodation of the other Within the last two weeks I have seen four cases in which the determination whether the condition was the precursor of sympathetic ophthalmia, or was innocent of any dangerous significance, was very difficult In former times, I excluded all cases in which the redness, lachrymation, etc, of the second eye disappeared upon the use of atropine to the injured or diseased eye, latterly, I have made use of cocaine in the same way With this elimination, which makes, perhaps too arbitrary a boundary between safety and conditions belonging to so protean a malady as sympathetic disease, the remaining cases can be looked upon as of the utmost gravity, and enucleation advised without hesitation in the most urgent manner, indeed my rule is, where enucleation is refused under such circumstances, to decline further responsibility in the case In the presence of sympathetic irritation, a moderate amount of vision in the first eye should be no bar to the effort to preserve the second Much has been written concerning the possibility of the injured or diseased eye, preserving greater usefulness of vision than the sympathizing one, my notes furnish 2 cases of doubtful value

Case 6—J. R R, male, æt 47, received a contusion of left eye several years previous, slight posterior synechiæ resulting, about a year later iritis of right eye followed, resulting in extensive adhesions, right eye, S $=\frac{1}{160}$, left eye, S $=\frac{1}{32}$

Case 7—M C, male, æt 35, contusion of right eye at 27, followed by failure of vision in the other eye recently, atrophic disk of left eye Condition of vision, right eye, S $=\frac{1}{64}$, left eye, S $=\frac{1}{200}$

During sympathetic serous iritis and sympathetic plastic iritis, Mauthner advises strongly against enucleation I have, however, enucleated in the early stages of both with good results

Case 8—S W, female, æt 30, at 13 received an

injury, involving cornea and ciliary region of right eye, at the time of observation the right eye was totally blind, the left with serous iritis, S $=\frac{20}{100}$, the right eye was enucleated, and soon after the left became still worse, a week later the nerve was resected and improvement began at once, at the end of four weeks the left eye had regained normal acuteness of vision

Case 9—E W, male, æt 58, while sawing wood slipped, and in falling brought his hand violently in contact with his right eye, when seen a few minutes later no external lesion was found, the anterior chamber was filled with blood, the margin of the iris was detached in the upper and outer quadrant, midway between the cornea and equator there was an apparent subconjunctival laceration, subsequently shown to be rupture of the sclerotic, ecchymosis of all parts in the vicinity of the globe No great amount of inflammatory disturbance ever appeared, the pain was inconsiderable, and with absorption of blood vision improved, and although no view of the interior could be obtained, in seven weeks the vision had increased so that he counted fingers at 6 feet Without any warning, between 10 A M of one day and 9 A M of the following day, sympathetic plastic iritis appeared, he stating that he noticed slight discomfort of the left eye upon arising, and thought he could not see as well, examination showed posterior synechiæ and the presence of flocculent lymph in the aqueous As might be expected, in so recent plastic iritis, the points of attachment yielded to atropine instillations, the pupil dilating irregularly, enucleation was made at once, and the patient sent to bed, the iritis proved very persistent, but eventually yielded, the patient visiting the office 4 weeks after the enucleation, for the first time, S $=\frac{1}{2}\frac{0}{0}$ Three years later I found slight pericorneal injection, iris freely movable, and vision the same

I think, however, that where plastic iritis has existed several days, and especially if atropine fails to loosen the adhesions, there is nothing to gain by enucleation during the active stage, but if, upon subsidence of the inflammation, there remains an apparently good opportunity to secure vision in the sympathetically affected eye, I believe it is best to enucleate before making an iridectomy

I have encountered but 3 cases in which I have made certain, that the sympathetic inflammation had been confined to the iris (or to the iris and cornea), in all of them a fair amount of vision was obtained by iridectomy following enucleation

There is a suggestive scarcity of literature upon the subject of treatment of sympathetic ophthalmia after its full development When the sympathetic inflammation is limited to the iris, serous or plastic iritis, there is still probability of affording relief, but when irido cyclitis or irido-choroiditis occurs sympathetically, there is but little for the surgeon to do I have not referred to the operation of cutting the ciliary nerve or the optic nerve posteriorly, or to evisceration of the globe, with or without the implantation of an artificial vitreous I have had no personal experience with either of them, and from reports of the first, and observation of the last, I have not been favorably impressed with them

In so serious a matter as the effort to preserve one eye after its fellow is functionless, or is likely to become so, considerations of personal appearance are of secondary importance, safety of vision being the object sought for, at every sacrifice but that of life, and I believe that patients have the right, if they so desire, to risk life for the preservation of vision The total loss of vision is but little less serious than the loss of life, and the same rules as to efforts to preserve vision apply, as are foremost in the mind of the surgeon who operates to save life The surgeon selects in amputation the point which will give to his patient the greatest possible opportunity for life, we select in the cases threatened with sympathetic ophthalmia the operation which experience has shown will give the greatest opportunity for vision

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DENTAL LESIONS CAUSING FACIAL NEURALGIA AND OTHER NEURAL PHENOMENA

Read in the Section on Dental and Oral Surgery, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY ARTHUR B FRELMAN, M D, D D S,
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When invited by the Secretary of this Section of your Association to prepare a paper to read before so intelligent a body of scientific men, representing the two noblest professions to which men have ever devoted time, toil or study, I instinctively shrank from the duty imposed with the conviction that there were many older and more experienced men in the profession who could present subjects of far greater interest than I, but your Secretary persisted and I reluctantly consented to prepare a paper on the above named subject While casting about for a topic on which to write, this subject was suggested to my mind, not because of anything of an original character which I had to present, but by a little episode to which I was compelled to listen while at dinner, and which may not be wholly out of place if related at this time

On the above occasion I was "given a severe pain"—not neuralgic in character, however—by a female fanatic on the subject of metaphysics, who detailed in minutiæ a most extraordinary cure by her metaphysician of a very dangerous attack of facial neuralgia, which had signally baffled the skill of several of the "Eddy Faith School" and other way-up Christian scientists, and this wonderful man had only to convince his patient that the pain was in her mind and it was gone forever As detailed by her, an educated dental practitioner of to day would not require a very active imagination to diagnose this as the old, old story of pulpitis of three or four weeks' duration, the pulp, after a lingering death, had finally expired, to be almost immediately succeeded by suppuration, pericementitis, and the accompanying pain and œdema, of perhaps unusual severity Fortunately for this latest metaphysical ass in attendance,

the pus had formed and the abscess had pointed when he was called to this case, of a class in which he had never been foiled

Who can wonder that two back-to back consultations with such a miraculous man was enough to cause this abscess, or any other, for that matter, to discharge itself freely? The reparative efforts of nature here wrought a tedious cure and an imposter secured glory alone due to her As I listened I thought how much more pain saving and scientific it would have been for a general or dental practitioner to have introduced an appropriate devitalizing application in the early stage of this neuralgic affection and in twenty or thirty minutes' time have saved this poor foolish mortal three or four weeks of excruciating agony

The great number and endless variety of facial neuralgic manifestations have perhaps tortured more people, attracted the attention and baffled the skill of more practitioners of medicine, and luxuriantly supported more quacks, than any other one disease, and they have not, except in isolated cases, wrought more than a temporary relief Why? Because they have not found the cause and then removed it

What is known in medical literature of this pain-demon which constantly or periodically mars the comfort of so many thousands of cowardly, and some hopeless, human beings, and causes the simple endurance of this vast amount of suffering, which saps vitality, wears out the strongest frames and causes disease in those who otherwise might enjoy a life reasonably exempt from ill health? I am compelled to answer, nothing What space is accorded to the subject in the several treatises on the practice of medicine which I have consulted is devoted to the acknowledgement of the ignorance of the subject as regards lesions of the teeth, and a few glimmering generalities on etiology and non-lesion in the affected nerve trunk, etc Indeed, one eminent writer on "Practice" goes so far as to record the following brilliant assertion "Caries of the teeth is an occasional cause of tri-facial neuralgia, but it is by no means frequently referable to this cause " He evidently takes it for granted that "caries" is the only ill which a tooth is heir to

So far as I have been able to discover, and I have examined the literature somewhat carefully, I have found only one writer who has accorded to dental lesions, as a causative agency of facial neuralgia, that place which it deserves, and I think even he was too modest in his assertion of their influence

It is with the desire to add something to the literature of the subject, and also with the hope that, if many medical practitioners do not listen to what I may present, some seed may at least fall on fertile soil—as I am confident it will—and bring forth its fruit, and also a sensibility to the sufferings of our patients and the thousands who are not our patients, but the dupes of quacks and nostrums, that I am persuaded to cope with this subject

With these preliminary sentences I will enter more or less minutely into the discussion of Tic Douloureux, and the principal lesions of the teeth which may provoke it, and at the same time introduce well authenticated examples from daily practice by way of illustration of some of the neural phenomena resulting

To quote a current definition of the term neuralgia, it is a disease the chief symptom of which is very acute pain, exacerbating or remitting, which follows the course of a nervous trunk, extends to its ramifications and seems, therefore, to be seated in the nerve I shall take the ground, notwithstanding the arguments pro and con, that neuralgia is a phenomenon rather than of itself a distinct disease—simply the expression of an acute or remote lesion The derivation of the word itself is from two Greek roots, *νεῦρον* (neuros), meaning nerve, and *ἄλγος* (algos), meaning pain, thus its simplicity of meaning is pain in a nerve Any pain, therefore, may very properly be called neuralgia, and to a great extent is by the masses, unless of such acute character and so localized that it cannot by any possibility be mistaken for a toothache, toeache, headache or backache

It is in this general sense that I shall employ the term in this paper, as it is in this general sense that the term is used by the medical profession as well as by the laity It is a poor philosophy, indeed, to reason that any effect is produced without a cause If neuralgia is a disease, what is its lesion? If it is simply a phenomenon, then what are the most frequent causes of its expression? I believe that in at least nine out of ten of all facial neuralgias the sole and only cause is in, and associated with, the teeth

Doubtless the members of this Association will agree that the conditions known as anæmia, debility, syphilis and miasma are predisposing causes, and I think they will also agree with me that the *prima facie* cause lies nearer the pulp-chamber of the tooth and has a more tangible union with the trifacial nerve than have these general conditions

The lesions of the teeth may be divided into two classes pulp lesions, or those arising from irritation within the teeth themselves, and pericemental lesions, or those manifesting themselves from irritation outside the apical foramen

Mentioning these pathological conditions in the order of their minimum importance, as they occur to me, first, noticing the pulp lesions, we have sensitive dentine as sometimes noticed in superficial and simple caries Irritation from this condition occurs most frequently in patients of low grade temperament with a predominance of the nervous basis and asthenic constitutions The symptoms may range from uneasy sensations, which may be located about the teeth, jaws, cheeks, eyes, nose, etc, to positive neuralgic pain or paralysis, and are usually aggravated by contact with sweets and sours and rendered intense by the simple touch of an instrument

Secondly —Deep-seated caries may or may not cause pulp irritation as above described, in proportion to nearness of proximity of the dissolution of calcific salts to the pulp itself, while the symptoms most to be relied upon are increased pain on contact with extreme thermal irritants, and cessation or remission on application of pain obtunding remedy

Thirdly —Complicated caries, including all cases of almost or complete exposure of the pulp, dying pulps from too near proximity of metal fillings or other predisposing causes This is perhaps the most fertile of all the lesions, and at the same time most easily diagnosed and treated

The symptoms may be paroxysmal and remittent, intermittent or constant pain, not always positively located, very severe during paroxysms, throbbing or jumping and usually increased at night

Fourthly —Calcific formations within the pulp-chambers, which are all pathological conditions, sometimes giving rise to types of neuralgia difficult in diagnosis and obstinate in treatment

These conditions are usually found in patients of sthenic constitution, and as classified and defined by Prof G V Black in the "American System of Dentistry," are six in number and as follows

1 Secondary Dentine —A new growth of dentine more or less regular in formation, excited by abrasion, decay or other injury by which the nerve fibrils are subjected to irritation at their distal ends

2 Dentinal Tumor within the Pulp Chambers — An erratic growth of dentine into the pulp chamber united to the wall by a pedicle, the structure usually being very irregular

3 Nodular Calcifications among the Tissues of the Pulp —These are smooth or nodulated stony masses of dentinal tissue deposited among the pulp tissues as a result, probably, of irritation

4 Interstitial Calcification of the Tissues of the Pulp,—which is the counterpart of calcifications elsewhere in the body

5 Cylindrical Calcifications of the Pulp —This form occurs infrequently, and always in the root canals, the tissues of which are probably in a state of fibrous degeneration

6 Osteo Dentine —An erratic formation showing both lacunæ of bone and dentinal tubes

The lesions of this classification are somewhat similar in the manifestation of symptoms, by no means always producing neuralgic trouble, though pain from secondary dentine impinging on the peripheral termination of the nerve fibrillæ of the pulp, causing its pressure and recession, and chronic irritation from pulp nodules and erratic growths, is not of unfrequent occurrence

Fifthly —Abrasion of the teeth, either mechanical or chemical, is not an occult but frequent cause of distressing and prolonged neuralgic pain The wearing down of the crowns of the teeth from attrition or otherwise, causing irritation, congestion, pressure on nerves and consequent reflex pain

As has been said, any and all of the above pathological conditions, as well as many others connected with the teeth, may cause hyperæmia of the pulp, predisposition to its death and all possible variety in neuralgic phenomena

Among the most frequent and painful of the second class, or pericemental lesions, we have

1 Pericementitis —This is usually an acute inflammation caused by irritation of the pericemental membranes by mephitic gases escaping from the pulp chamber through the apical foramen, resulting from putrescent pulp

The symptoms are usually decided soreness, acute throbbing pain beating with the circulation, violent suffering upon concussion of tooth, obliterated health line, dull heavy pain diffused over the entire side of face, neck and head, also a peculiar bluish appearance of tooth on comparison with adjacent ones, and lack of pain on thermal change

In many instances the escape of mephitic gas is slow, the irritation of pericementum correspondingly chronic, in which condition pain of a reflex character is frequent and severe, and has been observed to extend over a period of many years

2 Exostosis dentium —A bony enlargement of the roots of teeth caused by slight and continued peridental irritation, exciting deposition of salts at the point of irritation

The varieties may be nodular, circumscribed or apical or diffused, and while the condition is not always accompanied by pain, very many complicated cases arise in practice

3 Absorption of Permanent Roots —A pathological condition analogous to absorption of other hard structures which, leaving the end of the root rough, spiculated and uneven, almost universally causes irritation resulting in severe reflex manifestations

4 Retention of diseased roots

5 Pyorrhœa Alveolaris and accretions of salivary calculous impinging on the gingival border

6 Mal eruption of and Impaction of the Wisdom Teeth

7 Diseased Antrum arising out of the foregoing or other causes

I am confident every dental practitioner before me can cite from his own practice case after case of facial neuralgia of severe type as an effect produced, illustrating each of the above distinct lesions as the cause

In connection with the close of this paper I wish to call your attention to some of the other very interesting neural phenomena which may be caused by dental lesions, through inosculation of the nerve-branches and reflex action, and perhaps I cannot do this in a more interesting way than to briefly relate the histories of a few cases from practice as related by those who have observed them

First A case, copied from the June number (Items of Interest) of the *Dental Independent*, and taken by that journal from the *London Dental Review* The patient had suffered fourteen years with dreadful pain in the eye, accompanied by a continual flow of tears and intolerance of light A diseased tooth was extracted from the upper jaw on the same side on which the painful eye was situated, when the the eye was speedily restored to health

Second An unusually interesting case of paralysis of an arm from reflex odontalgia through inosculation of the trifacial nerve and brachial plexus, as related to the students of the Philadelphia Dental College by Prof J Foster Flagg A Western Judge (from Arizona, I think), had suffered with paralysis of an arm for some months before going to Philadelphia for medical treatment, which he had received there for a space of three months, without success, when he incidentally called on Dr Flagg for dental

services Had experienced no pain in teeth, but on examination complicated caries was found on distal surface of a lower left bicuspid On probing same there was decided arm response, *i e*, pain, numbness, etc, in fingers and hand The pulp was sedated and devitalized, and immediately arm recuperated, and in something like a week the paralysis was completely cured

Third Another case related by Prof Flagg, of intermittent paralysis of the muscles of deglutition caused by general dental irritation from sensitive dentine and vitiated oral fluids Patient was a young lady some 28 or 30 years of age, who was at times afflicted with paralysis of deglutory muscles, intense paroxysms of pain, usually excited when sensitive dentine was irritated by pressure of foods or the tongue, and also brought on in all their intensity by the touch of an instrument, when the agony of expression of the countenance and drooling of saliva were pitiful The introduction of ½ dozen amalgam fillings wrought a complete cure

Fourth A case of severe ocular pain occurring in the practice of my preceptor, Dr Daniel B Freeman, of this city, some years since The patient had suffered from a painful eye and been under the treatment of an oculist for six months without improvement While waiting for the arrival of the physician one day he complained of terrific supraorbital pain, and entreated that something be done for his relief, and in compliance tr of aconite was applied over supraorbital foramen, when instantly the pain flew as if by magic to a partially covered root of a tooth on the same side of face The root was extracted, found to be exostosed, and the pain in the eye never returned

Finally A case of diffused facial neuralgia from abrasion, secondary dentine and exostosis Patient 50 years of age, sthenic constitution, had suffered from neuralgia for a year and a half or two years, four roots were present and the balance of the teeth in the upper jaw much abraded from attrition The roots were extracted and found exostosed Pain still continued and finally, at two or three sittings, the abraded teeth were all extracted, and no further trouble has been experienced

I would not have you understand me to say that all suffering is caused by tooth lesions, neither do I assert that all pains and aches traceable to the teeth for their cause, rightfully or technically come under the head of neuralgia I do claim that very many more of them than is suspected are occasioned by these lesions To the end of time we will all doubtless be frequently brought face to face, in our efforts to diagnose obscure cases, with a black, impenetrable wall, so high and broad that we cannot see over or around, so thick that no ray of light will shine through This must necessarily be the case, but to find the cause and remove it should be our highest and chief aim, failing in this, we can do no less than our predecessors have done—treat facial neuralgia on the sedative plan

PUERPERAL TETANUS

Read before the Medical Society of the District of Columbia, May 18, 1887

BY C V BOARMAN, M D,
OF WASHINGTON, D C

I was summoned in haste to see Mrs T, in her second confinement, March 16, 1886, at 8 30 A M The messenger stated that there appeared to be serious trouble, as she had been in labor since the preceding evening, a midwife being in charge I at once went to the assistance of the woman, and found her suffering acutely and anxious for aid Upon making an examination, my hand encountered the child's hand and arm (the former lying in the vulva), the os uteri was so firmly contracted around the child's shoulder that it was impossible for me to force my hand beyond it, nor could I dilate it, although I worked assiduously for over an hour The womb was in a constant state of action, brought about by numerous doses of fl extract of ergot, administered by the midwife in charge the preceding night, an ignorant old woman Seeing that it would be impossible for me to accomplish podalic version alone, I asked for and obtained consultation Dr A McWilliams having been called, he made several ineffectual attempts to introduce his hand into the uterus

Concluding that it would be impossible to either turn the child or convert it into a head presentation, we then called the husband and laid before him and the wife the two operations, Cæsarean section and embryotomy, they would not allow the former, but willingly gave their consent to the latter, the child having been dead some time

Having administered ether to the patient and produced full anæsthesia, I again attempted to introduce my hand into the uterus, but could not overcome the rigid contraction of the os uteri, which hugged the child's shoulder so tightly that I could not even insinuate the end of my finger between it and the child Dr McWilliams also made an attempt to do so but failed

Seeing the absolute impossibility of delivering the child, we at once, with the assistance of Dr Briscoe, proceded to perform embryotomy After working for over two hours we succeeded in removing the child, which was far advanced in decomposition After delivering the placenta the womb contracted nicely, the woman reacted from the anæsthetic, and appeared to be quite comfortable

March 17 —Mrs T was very cheerful and doing well, asked for food, and said she had passed a good night Lochia normal and satisfactory I again saw her late in the evening, and found her restless and complaining, slight febrile reaction, quick pulse, and some abdominal tenderness

The mother of the patient requested me to see a man in the next room, stating that he had been sick for some time with erysipelas, and that he had a large abscess developing beneath his right ear I declined after giving my reasons for so doing, and ordered his immediate removal to a hospital if possible That being out of the question he was carried to a distant part of the house and the room well aired and fumigated,

it was separated from the lying in chamber by a board partition only, a very dangerous neighbor for a woman in confinement

March 18 —We met quite early and found our patient suffering with a well marked case of puerperal fever, which ran its course in a few days, and convalescence had begun to establish itself, when, upon making my evening call March 23, I found Mrs T complaining of a stiffness of the jaws and an inability to open her mouth sufficiently to take nourishment She had great pain in the back of her neck, and there was also considerable muscular rigidity, the peculiar *risus sardonicus* was present I at once concluded that we had a case of tetanus to contend with, but the woman being of a highly neurotic type, subject to hysterical manifestations, and having always been treated as a spoiled child, I hoped that it would turn out to be transitory

March 24 —As indicated by the symptoms of the preceding evening, Mrs T 's was a well marked case of tetanus, the jaws locked, intense pain the back of the neck, and a rigid contraction of the longitudinal muscles, they were in a state of tonic rigidity, opisthotonos was constant and well marked, the mind perfectly clear, pulse frequent and small, temperature increased (but having misplaced my chart I can not give its exact height), speech and deglutition difficult and painful The abdominal muscles were alternately rigid and relaxed and respiration painful The spasms recurred with great frequency till death put an end to her sufferings on the morning of March 25 No post-mortem examination was allowed

The case just reported was certainly a most formidable one The womb through necessity was subjected to considerable handling, and to the introduction of instruments into it, as the delivery was a most tedious process and the child removed in pieces, as its limbs were so softened by decomposition that they would stand but little traction without separating, besides, the mother had been freely dosed with ergot by the incompetent midwife the preceding night, causing the uterus to be in a state of rigid contraction

Gallabin[1] states that puerperal tetanus is very rare and that no instance of it occurred in 46,089 deliveries in Guy's Hospital Lying in Charity, and that he had only met with one case

My patient had every attention, no exposure to cold, absolute cleanliness, was well washed and syringed *per vaginam*, with warm, carbolized water, and also bi chloride of mercury solution, and even the interior of the womb received attention

Puerperal tetanus resembles surgical tetanus in that it arises from some irritation connected with the local traumatic condition in the uterus or vagina No doubt this had considerable to do with the production of tetanus in my case Dr Robert Reid[2] states that injuries of the internal organs do not appear to have much tendency to produce tetanus, which appears to be the case, as the uterus is subjected to more rough handling, scraping with curetts, lacerated and torn during labor, by its process and instruments in the hands of physicians and others Yet the patients make good recoveries, and it is a rare occurrence for tetanus to follow the above injuries, although it is occasionally caused by a small piece of placenta, left in the womb, as was the case in a patient of Dr Banga's, but his followed an abortion

Upon looking into the literature of tetanus following gestation at full term, I find many causes described Garrigues,[3] who has looked into the subject with great care, succeeded in collecting 32 cases, which he has tabulated, giving their supposed cause, mortality and treatment According to his table there were only 3 recoveries Those following abortion were 25, with 2 recoveries In the majority of the cases there existed complications at the time of the confinement, such as forceps delivery, retained *placenta, ruptured perineI* and hour glass contractions, necessitating dilatation for the purpose of placental delivery and hæmmorrhage

Under the heading "Puerperal State and its Complications," in the catalogue of the Army Medical Library, puerperal tetanus is of rare occurrence After a careful search I succeeded in finding a few very interesting cases which I will take the liberty of reciting in part as they are of great interest, giving their supposed cause where possible

Case 1 —Reported by Quinton Gidbon,[4] was that of a woman æt 32 years, primapara, labor tedious, pains so distressing that he administered chloroform for their relief from time to time At noon the head being well down in the lower strait, and the pains having abated, he delivered with forceps, the placenta being retained by an hour-glass contraction, he was compelled to introduce his hand and deliver it The patient complained constantly during her labor of inward heat and thirst, which continued after delivery, in 48 hours these symptoms abated, and she recovered so rapidly during the following 3 days as to be considered convalescent On the morning of the 12th she complained of slight stiffness and pain in the muscles of the neck and lower jaw, with difficulty in swallowing, all the symptoms pathognomic of tetanus followed, and she died in 60 hours after their first appearance Gidbon stated that the above case was his first one in a practice of 40 years Was this traumatic tetanus brought about by injury done the parts by forceps or hand?

Case 2 —Reported by Dr R C Bennington,[5] was that of a woman æt 30, secundipara, was delivered with forceps after great trouble, perineum was torn, child still born She died in 24 hours after the first symptoms became apparent, of tetanus, which took place on the seventh day after confinement Here we also have a traumatism

Case 3 —Reported by Dr McDonald[6] A secundipara, her delivery was natural and easy, and of only a few hours' duration March 9 first symptoms of tetanus became apparent, spasms of an opisthot-

[1] Manual of Midwifery 1886
[2] Nature and Treatment of Tetanus Robert Reid M D
[3] Garrigues H J, Obstetrical Tetanus and Tetanoid Contractions 1882
[4] Trans Medical Society of New Jersey 1878
[5] *British Medical Journal* London 1886
[6] Transactions Obst Soc Edinburgh, 1874-77 p 101

onic character set in, and all other manifest signs indicative of the above disease The patient died the same day In this case no traumatic cause existed, the onset of the disease was sudden and its termination very rapid The post mortem examination presented some lesions of the brain, which looked as if eclampsia was associated with it

Case 4 —Another peculiar case without traumatism is that of Dr John Haddon[7] The mother of 8 children was confined March 11 Labor slow but normal Patient did well until the 13th, when a rigor occurred with abdominal tenderness She appeared better in the evening

March 14, symptoms of tetanus, otherwise doing well, lochia normal, no abdominal tenderness, but the uterus was large and rather soft as felt through the abdominal walls

March 17 Tetanic spasms of the jaws and trunk, speechless, but seemed conscious Upon making a vaginal examination, on the right side of the womb, which was still large and flabby, easily admitting the hand, was discovered some foreign body or substance, it felt in consistency similar to the uterus and seemed incorporated in its walls Several attempts were made to remove it, but had to desist for fear of injury to the uterine substance

The patient died of tetanus at 1 30 A M, March 18 No post mortem examination was made

Case 5 was one of forceps delivery reported by Dr Kuhn,[8] followed by tetanus on the eleventh day after delivery, and death on the thirty-eighth day

Case 6 —Ehrendorfer[9] reports an interesting case of labor followed by tetanus which recovered Attempts were made to deliver with forceps, but unsuccessfully Craniotomy was resorted to and a full term child delivered On the fourth day after the operation symptoms of tetanus appeared, on the seventeenth day she left the bed, and on the twentieth day she was discharged

Case 7 —Werner[10] reports a case to which he was called to check hæmorrhage after delivery, a midwife having had prior charge Tetanus set in on the ninth day, and patient died 6 days later

Case 8 —Dr Keeting[11] reports a case attended by considerable hæmorrhage, but the patient reacted nicely and was doing well, when tetanus set in on the eleventh day and she died soon after

Case 9 —At the Lying-in Hospital, Prague, in the service of Dr Rubeska, a case of tetanus following a forceps delivery occurred The patient died Upon making a post-mortem examination there was found metritis and endometritis Reported by Dr W R Endres[12]

Case 10 —Reported by Dr Ditzel,[13] who was called on account of hæmorrhage after delivery of a living child, found her very anæmic from loss of blood, uterus very high up, flabby and enlarged April 6, 3 days after, symptoms of parametritis, which apparently grew better till April 12, when tetanus set in and she died, 2½ days after first signs of tetanus, 10 days after delivery

Puerperal tetanus, although known to the ancients and mentioned by both Aretæus and Archigenes, apparently escaped the notice of our leading obstetrical writers, until Sir James Y Simpson's attention was drawn to it in 1854 He was the first to write an elaborate article on the subject, giving the record of 28 cases collected by him from various sources He was followed by an exhaustive treatise on the same subject by Garrigues,[14] to whom I am indebted for much of my information In 1849 Pitra Aubinais[15] reported 3 cases

In America and Europe puerperal tetanus is very rare, even in our Southern States, where we have many negroes and a high temperature, the latter being mentioned as a cause

In India, Waring[16] states that in 3 years 232 women perished from puerperal tetanus at Bombay Colored races are more prone to it than white, and hot climates are predisposing elements, particularly during the wet seasons It is more common in the country than in the city, and very rare in lying in institutions Advanced age is frequently a cause, particularly after abortions, as are also first pregnancies, according to Garrigues' table To show how very rare this disease is Merriam collected 10,190 cases of difficult labor with 106 deaths, and only 1 died of tetanus

The puerperal state itself is a predisposing cause, particularly in neurotic females, as are also mental excitement, grief, and anxiety Hæmorrhage, by its debilitating and prostrating influence, is a prominent cause of tetanus

Suppression of the lochia, or a profuse perspiration, are looked upon by Pitra Aubinais as unfavorable symptoms and likely to be followed by tetanus

Throat troubles occasionally precede it, Garrigues mentions 3 cases where this was the case

Injuries to the womb, vagina and perineum, made either by instruments, or the hand of the operator in turning and the delivery of retained placenta, particularly where hour-glass contractions exist, are exciting causes of tetanus

The retention of small pieces of the after birth or its membranes is dangerous, and where no other cause can be found should be carefully looked for

Carl Schroeder attributes septicæmic influences as causes of lock-jaw in either abortion or gestation at full term Exposure to cold after confinement has been followed by tetanus

One great reason why we do not meet with this disease oftener is because the uterus is itself or almost entirely supplied by nerves from the sympathetic system, and, as stated by Curling, tetanus is more easily excited by lesions of parts supplied with nerves from the cerebro-spinal system than by those supplied by the sympathetic system

7 Edinburgh Med Journ vol xix 1873, pp 34-36
8 Wiener med Blätter, 1881, vol iv, p 1599
9 Wiener medicinische Wochenschrift, vol 33, 1883, pp 5-10
10 Med Correspondenz Blatt a, Wurttembartz Landesver, Stuttgart vol liv, 1884, p 213
11 British Medical Journal, London, 1883, vol 1
12 St Louis Cour Med , vol x 1883 W R Endres, M D
13 Hospital Tiden , Copenhagen, vol viii, 1881 Ditzel

14 Obstetrical Tetanus and Tetanoid Contractions H J Garrigues, 1882
15 Revue Médical Chir , vol v 1849 pp 149-159 Pitra Aubinais
16 Indian Annals 56, Br and For Medico Chir Rev , vol xviii, 1856, p 431 Waring

THE USE OF THE DEEP BURIED CONTINUOUS ANIMAL SUTURE IN LAPAROTOMY AND PERINEORRHAPHY

Read by title in the Section on Obstetrics and Diseases of Women, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY E W CUSHING, M D,
OF BOSTON MASS

In his operation for restoration of the perineum, the lamented Schroeder lately used two or even three layers of continuous catgut suture, superimposed one on the other and running from before backward, and then in the reverse direction, thus building up a perineum before he united the vaginal mucous membrane

Jenks' operation for ruptured perineum proceeds, as you remember, by splitting the septum between the rectum and the vagina, dissecting it in both ways until the adhesions are freed, and then, by bringing the lateral surfaces together, the incision, previously horizontal, is made vertical Jenks removes the flap of vaginal tissue thus freed Dr Marcy has modified the operation by retaining this flap, uniting its edges in a straight line, continuous with the new perineal raphe To hold the parts better in apposition he inserts pins in each side, which are united in the vagina and outside of the body by projections with hooks or eyelets on them

Now, in moderate cases of rupture of the perineum, the buried continuous suture of Schroeder may be adapted to the operation, and I have used it in this manner Commencing at the very bottom of the wound made by splitting the septum, as already described, one end of a piece of tendon or catgut is attached in the median line, and then the sides are brought together by stitches taken with a large curved needle, each stitch taking up more tissue on alternate sides, until three or four on each side have been inserted, then the stitches are taken deeper so as to reach the ends of the sundered transverse muscles of the perineum, and draw these together These stitches may be taken deeply with safety, because there are no vessels to be injured except the pudic arteries which lie close under the rami of the pubic bone The rectum is of course carefully guarded from injury by one or preferably two fingers in it, and the whole operation can be conveniently performed under irrigation with a sublimate solution 1 2000

Each stitch thus reinforcing the previous one, the continuous suture brings all the tissues into close apposition, leaving no pockets, and I am now content to dispense with the use of pins, as by the above method there is no dragging of the tissues out of their normal position by any bag-string action of threads or wire

The end of the long continuous suture should be cut off, after securing it, and afterwards buried by bringing together, in the median line, the edges of the vaginal mucous membrane in the usual manner By thus burying the end of the suture there is less chance of septic matter creeping into the wound at the point of emergence of the catgut

I am using this method, with excellent results, even in cases where the rupture extends into the rectum Here the lower edge of the split septum is doubled on itself, and becomes the two edges of the rent in the rectum, to be united from the anterior or raw surface with the finest silk continuous suture

I turn down the point of the flap of vaginal mucous membrane so that the anterior end of the union of the parts is Y shaped

In regard to the use of the buried continuous animal suture in laparotomy, it was reported to me some months ago that Prof Thomas was closing his abdominal incisions in this way, and I have since then used it with great satisfaction Of course it is easy to see that, if the abdominal incision is made under irrigation down to the peritoneum, although strong antiseptics cannot be used in the abdominal cavity, yet it is very desirable to retreat from the peritoneum, if I may use the expression, with irrigation of the abdominal wound, in order to avoid mural abscess, etc

Now this is done as follows the peritoneum is first carefully sewn up with a continuous suture of fine tendon or catgut, and then the sublimate irrigation can be turned freely into the wound When this is well douched and clean the sheath of the recti muscles is to be carefully united with the same suture, and then the tissues held in apposition in order to prevent accident during vomiting, etc

Dr Thomas does this in the following manner, as I observed lately when he kindly explained his method to me during an operation at the Woman's Hospital

Preluding that after sewing up the peritoneum he is careful, in uniting the muscles, to include the edges of the line of union of the peritoneal incision, in order to avoid pockets, he passes two or three silver wires through the skin and fat down to and slightly into the muscular layer These silver sutures are tightened and twisted after the skin has been united by the continuous suture

I have drawn the fat and cellular tissue together without the use of the silver wire, using a curved needle in a manner analogous to that described in speaking of the perineum operation That is, the curved needle carrying the same suture is entered horizontally first on one side and then on the other, in the wound, not through the skin, thus bringing the fat and connective tissue together, so that the incision in the skin comes almost together, and the wound is effectually guarded against gaping or accidental rupture The end of this long suture should now be fastened, cut off, and buried The skin brought together neatly, with another animal suture, and a dressing employed which I think is of great value That is, the irrigation fluid is carefully dried from the skin with sublimated cotton and the wound painted with a saturated solution of iodoform in flexible collodion, a little absorbent cotton is laid over this and saturated with the iodoform collodion, so that the wound is hermetically sealed This dressing, if all goes well, need not be removed or changed There are no stitches to remove At the end of some three weeks the piece of iodoform cotton is removed, carrying

with it the bits of catgut which were external to the skin, the rest is all absorbed or organized

There are one or two points of caution to be observed in the above procedure the first and most obvious is to avoid wounding the bowel when sewing up the peritoneum, and the best way to avoid this is to lift up the ends of the incision, one by the suture and the other with a blunt hook

Secondly, not to draw the continuous suture too tight, for it brings the surfaces in apposition everywhere and not at certain points only, and if drawn tight may strangulate the tissues

Thirdly, particular care is necessary with so long a thread that it may not become soiled or infected during the different parts of the operation Neglect of either of these points may be fatal

COCAINE, AND ITS EFFECTS

BY GEORGE N MONETTE, M D,
OF NEW ORLEANS, LA

Cocaine has been the vaunted remedial local anæsthetic in all forms of pain and suffering, yet it seems that its use in dentistry cannot be availed indiscriminately I have been called a number of times, by a neighboring dentist to attend his patrons, to whom he had given cocaine hypodermically, and without anæsthetic influence, *per contra*, a decidedly deleterious effect had been wrought in each person, requiring several hours for its complete counteraction by the use of opiates and stimulants

The first case to which I was called was that of a young man, single, and a saddler by occupation, by the incidental right of his trade, a strong man, yet under the deleterious influence of cocaine, was completely unnerved The dentist had inserted the cocaine in the gums When seen, the patient was bathed in a cold perspiration, his eyes glistening, yet the pupil was not dilated complaining that he was blind, and that he would die, asking to be held Pulse was much accelerated, feeble, soft and compressible In other words, he really acted as if deranged I gave morphia subcutaneously, and with good effect

Case 2 —I found a colored woman on the floor in the dentist's office complaining of being dizzy, unable to walk, of being sick, with vertigo, pulse slightly increased in frequency, not cold Somewhat excited, no perspiration She recovered within two hours and without any remedy save the inhalation of ammonia

Case 3 was a young man similar to *Case 1*, yet not quite so strong, but with identical complications, which alarmed him very much I gave him morph sulph hypodermically, with the inhalation of aq ammonia and nitrite of amyl, with prompt benefit In each case the features were severe, yet not dangerous

MEDICAL PROGRESS.

PAPOID AND PEPSIN —PROFESSOR D FINKLER draws the following conclusions from some comparative experiments between papoid and pepsin From three experiments with meat it was seen that papoid shows a more energetic peptonizing power than pepsin, and specially so when the proportion of the liquid to the albumen is small—*i e*, in the proportion of concentration in which food generally exists in the stomach and in the intestines The great variability in the quality of commercial pepsin (some of which will under the most favorable circumstances not peptonize more than 20 per cent, of the albumen of the meat) gives papoid also the preference, as it is made of one uniform quality

Experiments with hard-boiled eggs showed that they are better digested by pepsin, if the quantity of liquid is larger in proportion As soon, however, as a more concentrated mixture is employed superiority of the papoid is at once evident

What effect can be obtained by the ferment in the human body?

a Concentration of the solution is of first importance It is impossible to create in the stomach and intestines such amount of liquid as would be favorable to the effect of pepsin The conditions, therefore, are very much in favor of papoid

b Importance of the Reaction —Pepsin acts in the stomach, but not in the intestines as in the latter The reaction is neutral or alkaline Papoid has little effect in the stomach, as the reaction there is acid When, however, the stomach is neutral or alkaline, papoid will peptonize, while pepsin will be useless The degree (amount) of acid reaction in the stomach differs greatly, especially in a stomach out of order, in which case the acid can be so highly acid or alkaline that pepsin would be of no value at all In the treatment of stomach catarrhs we will, moreover, find that, as a general rule, the contents of the viscus have been rendered artificially neutral or alkaline by the administration of remedies, so that in these cases pepsin will have absolutely no effect Papoid, on the contrary, will act energetically

c Regarding the Time Available for the Digestive Ferments to Act in the Body —In the case of pepsin this is necessarily very short, as the action ceases when the food enters the alkaline reaction of the intestines In the case of papoid, which can act well in alkaline reaction, the time is practically unlimited, as it continues acting on the food during the whole time it continues in the body For all these reasons the conditions for the effect in the human body are far more in favor of papoid than pepsin, and especially as under existing circumstances (high degree of concentration) papoid has been shown to act much more energetically It is only too clear that the preference should be given to papoid as a digestive ferment for the treatment of dyspepsia Besides dyspepsia, the papoid is of great importance in the treatment of diphtheria

Its effective power consists in the circumstances that no free acid need be present in the application,

and further that the moisture of the diphtheritic membranes is quite sufficient to allow the ferment to dissolve the solidified substances of the membranes No other ferment has so far been able to obtain these results It is on this account that many competent experimentalists and specialists have lately made observations

From all these circumstances there is no doubt that in papoid we have a ferment which has a great future before it, and it is for this reason that I have made a special study of the manner of preparing the papoid, and I have had the satisfaction of obtaining the most favorable results from its use in the treatment of disease —*Therap Gazette*, Aug 15, 1887

TUMORS OF THE BREAST TREATED BY ELECTROLYSIS —DR ALFRED C GARRETT, of Boston, read a paper on this subject at the recent meeting of the IXth International Medical Congress Many, or most of the tumors that so frequently occur in the human breast, we find can be completely cured if treated while young, or new—that is, while in the first stage of existence—by certain mild applications of electricity

In the first place, to obtain uniform success by this method, we must plan to find these tumors as soon as possible after they form in the breast, while they are in a curable stage in the majority of cases However, we already know we cannot assume that every morbid lump that grows or appears in the human breast begins from the first a simple or non-malignant tumor, though the most of them seem to do so, judging from the uniformly successful results of these treatments by electricity when applied to the selected, new, or recent tumor

It is determined that here we must choose the form of electricity and method of application as carefully as we seek to find the curable cases, for we are not to resort to the usual electro puncture needles, knife, wire, nor any active destructive electrolysis, nor any other means that produce solution of continuity We are to employ simple surface applications of certain graduated, galvanic, steady currents, through peculiar, large, soft, and moist electrodes, so adjusted close to each side of the tumor as to cause this gently chemical current to completely permeate, and wash through the whole mass from side to side in its deeper parts, mainly in direction toward the axilla, for about half an hour at each *seance* It is not enough to simply apply the two electrodes to the surface of the breast or in any manner Moreover, we need to use a milliampèremeter to measure the current that actually passes through the tumor and gland, also a key board that can enable the operator to pick up and increase the current, cell by cell, to the tolerant and efficient strength, which will be from ten to fifty milliampères The current required for each individual case cannot be stated in exact terms, as it is found in practice there is a wide difference in the resistance, tolerance, and effect in different persons, yet this point is of great importance

The result is, that out of 186 tumors treated since 1864, a record of them having been kept and looked after, 157 disappeared and have remained well Several others did not quite obliterate, however, but left a small nodule the size of a chestnut, which in every case disappeared or remained benign *Medical Record*, Sept 10, 1886

PREVENTION OF PUERPERAL SEPTICÆMIA —DR ARCHIBALD D MCDONALD says "Heterogenetic," or more plainly, inoculated septicæmia, should be unknown That is the ideal, and I believe it may be realized by the following method, which is an intensified form of that used by a brother practitioner who had some unfortunate experience which led him to appreciate the benefit of using iodine in obstetric practice Dr Wynn Williams strongly advocated iodine fumigations I believe Well, (1) the nail brush is to be used before leaving for the case, (2) using warm water and soap not previously used, the hands are washed in the patient's room, or room adjoining as the case may be, then (3) about a drachm of liquor iodi is added to about a pint and a half of warm water, and the hands thoroughly rinsed in the mixture, (4) carbolic oil (1 to 20), or in cases of forceps or turning, preferably fresh benzoated lard is used for lubrication, and the examination of the patient proceeded with

During the progress of the case until delivery takes place the iodized water is occasionally used, and instruments are thoroughly washed (blades and handles) with it Of course, in ordinary practice one avoids unnecessary handling of erysipelas, scarlatinal, ulcerating sores (such as scirrhus), and other infectious cases, as well as of dead bodies, or making of *post-mortem* examinations, or even shaking hands with anyone who has been in attendance on any septic case whatever

"Autogenetic" septicæmia, I need scarcely say, is rendered less likely by avoiding lesions and remnants of secundines, through not rupturing the membranes too early, giving timely instrumental help when required, and in doing so carrying the forceps handles well forward, somewhat approaching a line parallel to that joining the umbilicus and coccyx, when the body is in the straight position, so as to lessen the danger of perineal laceration, and by careful expression of the placenta, and gentle extraction of the membranes The same precautions in managing labor of course also help to diminish the chance of septicæmia by inoculation Should the hands become a little hardened by the iodine, rubbing with vaseline and the use of kid gloves during sleep will remedy that not very important matter I do not require to occupy space with evidence in support My cases have included putrid fœtus and emptying uterus of secundines, removing placenta in abortion with vulsella and uterine forceps, adherent placenta, turning, and the various malpresentations, as well as the ordinary cases, extending over a period of six years There has been only one case of septic pneumonia, and there I was stupid enough to use oil which I was given in the house, for lubricating the forceps It was one of my early cases From complications following labor, too, I have been wonderfully free I com-

mend the practice to be used more widely than it now is —*British Medical Journal*, Sept 3, 1887

DIGESTION OF CARBO-HYDRATES —The paper of Ellenberger and Hofmeister, recently published in *Biedermann's Centralblatt*, contains a summary of their long continued researches on this subject They have experimented upon the horse, and their conclusions are by no means identical with those that have hitherto been received An abstract, by Mr J Fletcher, of this important paper appears in the current number of the Journal of the Chemical Society, and it is so lucid and concise that we reproduce it almost *in extenso*

"The action of saliva in the process of mastication is shown to be more mechanical than chemical The quantity of saliva used depends on the dryness and roughness of the food rather than its contents in starch, and the authors think that the chemical activity of saliva owes much to spores, which, floating in the atmosphere, mix with the food and assist in the fermentation process A digestive action of the mixed food takes place in the stomach when the acidity due to hydrochloric or lactic acid does not exceed 0 03 to 0 04 per cent The left section of the stomach of the horse does not secrete a gastric juice, this is the function of the right portion The gastric juice of the horse contains lactic, fatty, and amylaceous ferments—the latter in small quantities Cellulose is not digested in the stomach of the horse, but muscle, fat, gelatine, and flesh generally are easily digested, bone and elastic tissues more slowly Pepsin operates actively only when acids are present, about 2 per cent of lactic acid or 0 2 per cent of hydrochloric acid being necessary The activity of pepsin does not increase in proportion to its quantity after reaching a certain point, but it rather becomes injurious The acid which appears first in the digestive process is lactic acid, and later hydrochloric, at the time of greatest activity lactic acid is present in the upper and lower extremities of the digestive tract, hydrochloric acid being found in the intervening part The digestion of starch in the stomach of the horse lasts for about two hours, that of albuminous matter takes place later, and occupies three or four hours after the eating of the food The drinking of water immediately after food does not appear to hinder digestion The secretions of the intestinal canal unite in themselves all the properties of the gastric juice, and can act as a substitute for it, and are particularly energetic in the decomposition of fats The duration of the digestive process in the horse is long, lasting almost three days A very active lactic fermentation of sugar takes place in the stomach and intestines, but the authors do not say that all the sugar which is lost in the course of passage is lost in that way, it is more probably reabsorbed"—*Lancet*, August 27, 1887.

CINQUEFOIL IN NIGHT-SWEATS —DR SAMPSON POPE, of Newberry, S C, writes to the *Therapeutic Gazette*, of August, 1887 I desire to call the attention of the profession to a vegetable remedy, native to our soil, for that troublesome accompaniment of wasting diseases, night-sweats Atropine is a good remedy, and in the majority of cases answers the purpose, but atropine is a very strong medicine, and must be used with great care A simpler medicine, answering the same purpose, would certainly be better King recommends it, but I did not get it from him, *I got it from an old negro*—from the same source that the profession got gossypium The remedy is one indigenous to the whole country, it is therefore within the reach of us all, it is the cinquefoil, *Potentilla canadensis*, called by some botanists *Potentilla sarmentosa* I have stopped night-sweats with it when *atropine failed to relieve* It is pleasant to take, when drawn it has an agreeable odor, much like table tea The manner of preparation is to pour boiling water on a handful of the vine, leaves, and root Let the patient drink *ad libitum*

A supply can be obtained through the Southern purchasing agency of Messrs Parke, Davis & Co, Charlotte, N C, or through Messrs Wallace Bros, Statesville, N C, or, if not too busy, about your own homes I hope that some manufacturing chemist will (should I be found to be correct in my estimate of it) give to the profession a fluid extract of the root and plant

CUTANEOUS SENSIBILITY IN RHEUMATISM —L BARBILLION says that as a rule disturbances of cutaneous sensibility are present in this affection Ordinarily the tactile and pain sense is diminished, sometimes increased The sense of heat is also affected, but most frequently electrical sensibility is disturbed, and it alone may be affected For a more or less long time after the attack there is more or less complete anæsthesia and loss of sensibility to Faradic excitation These changes are generally limited to the part of the skin covering the affected joint, but may extend over the entire limb The diminution of the reflexes, the muscular paresis, the muscular atrophy following indicate, as do the disturbances of sensation, that the nervous system is affected—acute articular rheumatism —*L'Union Medicale*, September 13, 1887

AMYL-HYDRATE AS AN ANÆSTHETIC —At the last meeting of the South-west German Association of Neurologists and Physicians for the Insane, PROFESSOR VON MERING announced that he had found a most valuable anæsthetic in amyl-hydrate (tertian amyl-alcohol), that he has tried the same in sixty cases of insanity, paralytics, and melancholia, in somnia caused by nervousness, and in feverish diseases, a dose from 30 to 75 minims, sleep lasting from six to eight hours, no bad results, the taste is pleasant as that of paraldehyde Von Mering gives this formula

℞	Amyl hydrate	ʒi
	Aquæ dest	ʒx
	Ext liquirit	ʒi

—*Therapeutic Gazette*, Aug 15, 1887

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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THE TREATMENT OF RECENT CASES OF INSANITY IN ASYLUMS AND IN PRIVATE HOUSES

The above constituted the subject of DR G FIELDING BLANDFORD'S address before the Ninth International Medical Congress in Washington, D C , and it was presented with the ability and practical good sense characteristic of the author Correctly assuming that recent insanity in very many cases is a curable disorder, Dr Blandford proceeded to discuss the question, whether recovery will be likely to take place only under asylum supervision, or is there a fair chance of curing the sufferer in a private house or the house of a medical man? In this country, and in recent years especially, it has been urged as a maxim that the earlier cases of admitted insanity can be removed to an asylum for treatment, the better is the prospect of their recovery And Dr Blandford readily admitted that, "for the great majority of patients asylum treatment is the only available method," while he claimed a certain proportion of insane persons whom it was important to treat, if possible, outside of an asylum In specifying this class of cases thus desirable to treat without legal adjudication or assignment to an asylum, he mentioned females of high rank whose friends are reluctant to apply for the necessary certificates, young persons of both sexes whose confinement in an asylum would constitute a great barrier to their getting employment after their recovery, and sometimes mar their prospects for life, cases of maniacal excitement or acute mania, caused by the use of alcoholic or other anæsthetics, or by mental excitement in subjects of a highly nervous or hysterical temperament, and many cases characterized by little excitement, and only such delusions as are harmless in their tendencies

It may be questionable whether Dr Blandford did not allow too much influence to the popular prejudice, or so called *stigma* supposed to be incurred by treatment in an asylum The fact of having been treated in an asylum for insanity undoubtedly operates as a hindrance, in some degree, to subsequent employment and the attainment of certain social relations so far as such fact is known But does not the detriment to the individual come from the fact of having once been insane, and the fear on the part of friends and employers that the same might recur, at any time in the future, rather than from the fact of whether he had been treated in an asylum or in a private house? The chief practical questions would seem to be, in determining the proper course of treatment for individual cases, are, *first*, as to the probable duration of the derangement, *second*, as to the ability to command the necessary medical attendance with thoroughly judicious nursing, and, *third*, the occupancy of such rooms as admit of the reasonable seclusion and safety of the patient That there are constantly occurring cases of acute insanity arising from temporary causes, which would recover in from one to six weeks, under the control of a judicious physician and two quiet, faithful nurses and the exclusion of interested and excitable friends, better without removal to an asylum than with, has been demonstrated within our own observation We are satisfied that in this country there is not sufficient attention given to the proper discrimination in this respect, and too uniform a tendency to send all cases to asylums, either public or private Dr Blandford's address is timely, and will have a good effect upon the profession generally

MASSAGE AND METHODICAL EXERCISE

The increasing experience with massage, and the appearance of several good books on the subject have given an impetus to the study of massage and methodical exercise that is gratifying In short, there seems to be a tendency in more recent therapeutics which leans towards a decreased use of drugs and an increased observance of the laws of hygiene, in the broadest sense, and in so far as the use of mechano therapy is concerned this is really going back to the first principles of the medical art In fact, an intimate connection may be traced between the revival of medical gymnastics, or muscle exercise for the purpose of healing disease, and the revival of the ancient gymnastics as a part of the necessary education of the body, though the revival of the former took place at an earlier date Hoffman wrote more wisely than he knew, perhaps, when he said in

the early part of the last century "Medicine will never progress until we apply the laws of mechanics and hydraulics" But it was not until a century after this that the Swede, Ling, reestablished the gymnastics of the ancients on a scientific basis, and became one of the first to elaborate a complete system on anatomical and physiological grounds The system gradually found adherents, until in 1876 von Mosengeil published in Langenbeck's *Archiv* the first complete and scientific treatise on mechanical manipulations physiologically considered

The most recent, and one of the ablest of the contributions to this subject is "Massage and Methodical Muscle Exercise," by Dr J Schreiber, director of the Sanitarium Alpenheim, in Styria, the book has been well translated by Dr Walter Mendelson, of New York, and is issued by Lea Bros & Co, of Philadelphia Schreiber has given in this work such a clear exposition of the whole subject, and so little general attention has been paid to it in this country, that a general analysis of the work may be interesting to our readers

As with many scientific practices, in the movement-cure empiricism preceded scientific demonstration It is now time, however, that empiricism be wholly excluded from the practice of massage, movement-cure, or mechano-therapy, as we may choose to term it In order to understand the action of mechano-therapy it is first necessary to know something of its physiological effects The primary (purely mechanical) effects consist in the removal of lymph, exudations, transudations and extravasations, the destruction of exudations by pressure, the removal of vegetations by frictions, and the solution and removal of adhesions The secondary effects act by increasing the circulation, by stimulating the muscular and nervous systems, by setting up molecular changes, and producing consequent changes in sensation, and by affecting alterations in the processes of general nutrition Inasmuch as mechano-therapy, by removing an exudation causing pain, may relieve pain it may be fairly claimed as an analgesic, and as the manipulations empty the lymphatics, and cause tumefaction, heat and redness to disappear, an antiphlogistic effect is produced, and as an accumulation of fluid may be prevented or removed it is plain that mechano-therapy has the power of causing resorption In regard to the secondary effects, there is a physiological theorem of great importance for the proper understanding of the subject, and one which is of practical application in the treatment of neuralgias "Any source of energy conveyed to a nerve from without first expends itself in producing molecular change, and this is again converted into energy manifesting itself through the various forms of innervation" But as yet we do not know the nature of the translation of this molecular change into nervous energy Of the chemical changes during nervous activity we know less than of muscle metabolism, but the more we know of these the more easily will we understand the as yet obscure points in mechano therapy

That systematic exercise is one of the best means of preserving and restoring the proper balance in the distribution of the blood in the body is recognized by all physicians Local hyperæmias can be made to disappear by exercise, as all brain-workers know Sommerbrodt has shown that in all exercises which increase intra-bronchial pressure, as singing, laughing, rowing, swimming, etc, the effects produced on the circulatory apparatus are diminished tension of the arterial walls, increased cardiac action When the exercise ceases the arterial tension rises again, and the heart beats slower Through its action on the circulation and heart active muscular exercise has distinct effects on the skin and kidneys, on the deposition and removal of fat, and in fact on every function and tissue of the body Du Bois-Reymond pointed out in his excellent address on *Exercise* six years ago that muscular exercises are really more exercises of the central nervous than of the muscular system, that they are especially exercises of the brain and cord, and that all species of bodily exercises are not simply muscular gymnastics but nerve gymnastics too This fact will be especially appreciated by those who have seen the beneficial effects of regular muscular exercise upon the insane, and upon anæmic and overworked girls By muscular exercise, too, we cultivate the sensory and the mental function as well as the motor nervous apparatus, especially when the exercise consists of complex movements And Johannes Muller made an observation which strikingly confirms the truth of what Du Bois-Reymond says, and upon the recognition and utilization of which the gymnastic treatment of chorea depends that perfection in bodily exercise consists often as much in the suppression of useless movements as in the acquirement of those desired

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In regard to the treatment of disease by mechano-therapy, a subject of special interest to the practitioner, Schreiber says that mechano therapy, in accordance with its physiological effects, will be successful where it is desired to produce the following results

1 To cause an increased flow of blood to the muscles and soft parts, increasing thereby the circulation and removing accumulations of the waste tissue, whose retention causes various disturbances of function To strengthen muscular fibres, and by setting up molecular vibrations to induce changes, not only in the muscle and nerve fibres, but perhaps even in the nerve centres themselves

2 To cause the resorption of exudations, transudations, and infiltrations in such organs as are accessible To effect the separation of adhesions in tendon sheaths and joints, without recourse to the knife To remove, by grinding away, intra arthritic vegetations (Direct effect)

3 To increase, by passive and active exercise of all the muscles, the oxidizing effect of the blood, in this way correcting disturbances in its composition, and stimulating all the vegetative processes

4 To relieve the congestion of such internal organs as the brain, lungs, intestines, uterus, kidneys, etc., by increasing the flow of blood to the muscles

5 To stimulate directly the sympathetic nervous system, thus increasing secretion, and reflexly the activity of unstriped muscle fibre, and so relieving various functional derangements

6 By systematic exercise (health gymnastics), to educate morbidly affected muscles, to convert abnormal into normal actions, and to suppress useless movements

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In his section on the mechanical treatment of neuralgias and muscular rheumatism Schreiber emphasizes the fact that a diagnosis between the two affections is not always easy, as they frequently coexist In claiming good, and even brilliant results for mechano-therapy in this field, he bases his claims only on long standing cases that have resisted all other means

In regard to the mechanical treatment of chorea it is interesting to note that Laisné, after numerous observations, concluded that 1 None of the means hitherto employed against chorea can show such uniform success as gymnastics 2 The mechanical treatment is applicable to almost all cases, whereas the medicinal very frequently is not 3 The improvement begins as soon as when sulphur baths are used, while the sedative action usually manifests itself within a few days 4 With the arrest of incoordinate movements, the general health of the child markedly improves, so that not only the chorea, but the accompanying anæmia is cured as well

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AN ERROR —In a previous number of THE JOURNAL, p 407, we announced the death of Dr Richard Quain, of London, as we found it in the daily secular press From a recent number of the *British Medical Journal* we learn that it was Mr Richard Quain, a cousin of the eminent anatomist, who died at the advanced age of 87 years, while Dr R Quain remains in good health

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THE AMERICAN PUBLIC HEALTH ASSOCIATION, will hold its fifteenth annual meeting at Memphis, Tenn , on Tuesday, Wednesday, Thursday and Friday, November 8, 9, 10 and 11, 1887, in Young Men's Hebrew Hall, corner of Union and Second streets Dr G B Thornton, of Memphis, Tenn , is Chairman of the Local Committee of Arrangements, from whom all needed information concerning railroad fares, hotels, etc , may be had

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SOCIETY PROCEEDINGS

PHILADELPHIA COUNTY MEDICAL SOCIETY

Special Meeting, September 19, 1887

THE PRESIDENT, J SOLIS COHEN, M D, IN THE CHAIR

DR F W PAVY, F R S, of London, addressed the Society upon

SOME MORBID CONDITIONS OF THE URINE

I am before you to say a few words upon certain morbid conditions of the urine, and my hope is that we may compare notes of observations in the old world with observations in the new world I shall first of all refer to albumin Albumin in the urine with us was formerly regarded as a matter of the most serious import, but we are now beginning to recognize that a certain amount of albumin in the urine is not always of grave import My own practice lies very largely with urinary diseases, and patients coming under my care always have the urine examined by an analyst, and I am frequently meeting with a certain amount of albumin in the urine, without its presence being attended with anything that would lead me to suspect that a grave condition exists In association with diabetes, it is not at all uncommon to find, when the patient first comes under observation, a certain amount of albumin in the urine, but when the patient is put under treatment for the diabetes, it is not infrequently found that the albumin disappears in the course of a few weeks In these cases of albumin in the urine, we must look to the general condition of the patient to see whether or not there are other indications of the existence of grave renal disease

There is another condition which I presume has been brought before the profession in America, in which albumin exists at a certain time of the day, and not at others I have suggested for this condi-

tion the term *cyclic albuminuria* I have studied these cases for some years past, and I should think that they occur in this country as well as in the old world I know that they occur in Germany, for the matter has been taken up there and followed out This condition is observed in persons who are excitable and of a nervous disposition, and as a rule in young persons, although I have met with some cases in the middle-aged The albumin is to be met with at one time of the day and not at others These cases are recognized, as it were, only by accident Sometimes the urine is examined on account of some pain in the loins, but most frequently these cases are discovered through examinations for life insurance purposes, or for some branch of the civil service, as is required by the Bank of England So long as the individual maintains the recumbent posture, no albumin will be detected, but in one and a half or two hours after rising the maximum quantity of albumin will be found As a rule, the quantity of albumin declines toward evening, and on going to bed it has entirely disappeared Sometimes a trace of albumin is to be found in the afternoon and evening, but the first urine passed on rising in the morning contains no albumin whatever These cases seem to be of no serious import I suppose that the presence of albumin depends on the condition of the vessels I suppose so, but certain it is that these cases are not associated with any constitutional condition I now come across quite a large number of them

I shall next refer to *sugar in the urine* This is another morbid element which has varying degrees of importance In young persons it is of the gravest import, while in elderly persons it is not so serious In early life I have known cases to go on for years, but this is the exception, the usual duration is about two years Ultimately they all terminate unsatisfactorily After the middle period of life, however, sugar in the urine has a very different significance In young subjects we have a disease which seems to be of a progressive nature Notwithstanding whatever we may do for it, there is something which insidiously progresses in the system and leads ultimately to a fatal termination But after the middle period of life a good deal depends upon the patient himself Under proper management the disease may, as a rule, be held under control and the patient live for years in a satisfactory condition, but to accomplish this, rigid measures of treatment must be carried out

One may express in a very few words, and without advocating any idea or theory, the precise nature of *diabetes mellitus*, or sugar in the urine I should speak of it as a defective or faulty assimilative action—a faulty chemistry The elements of the food which we take undergo chemical change in the system, by which they are rendered useful A certain group of principles entering largely into the composition of our food, are the carbohydrates These principles in diabetes do not undergo their proper chemical change and thus become eliminated from the system What do we observe in a state of health? A person takes one of the carbohydrate group, it makes no difference which—starch, grape sugar, cane sugar, dextrine, or sugar of milk—they all behave alike in the system, and it is so changed as to be rendered subservient to the requirements of the system In a state of health, we see nothing more of them Not so in diabetes In the diabetic these carbohydrates are no longer consumed There is a faulty disposal of them Received into the alimentary canal and afterward absorbed, they do not undergo their proper transformation, but pass off from the system in the form of sugar in the urine, so that I say, looking at these two conditions, a condition of health and a condition of diabetes, we may describe diabetes as a faulty disposal—a faulty transformation or assimilation of the carbohydrate elements of our food In diabetes, in proportion as these carbohydrates are taken, so will be the amount of sugar in the urine This I can say without any hesitation whatever

In order to follow a case of diabetes satisfactorily, I consider that a quantitative examination of the urine should be made, and, for myself, I feel quite in the dark as to the progress of a case unless I have this quantitative examination In my own practice, I keep an analyst who examines the urine of patients—a night and morning specimen—and directly I get the analytical report, I can read off exactly the condition that I have to deal with Without this I should be perfectly in the dark as regards the progress or the severity of the case It does not do to rely on the specific gravity I have met with a specific gravity of 1 040, without any sugar in the urine Medical men are often concerned over the specific gravity of the urine The patient may have been put under treatment, but still the specific gravity keeps up to 1 032 or 1 035, although the urine is free from sugar Under these circumstances, I say to the medical practitioner Do not concern yourself with the specific gravity If the urine is free from sugar, the high specific gravity is a favorable sign, as showing that the kidneys are equal to good work If the kidneys were diseased, there would be a low specific gravity The high specific gravity may be kept up by the passage of only a limited quantity of water, and by the nitrogenous diet which the patient is taking, adding to the elimination of urea On the other hand, a low specific gravity may sometimes be met with where there is a considerable quantity of sugar in the urine I have met with a specific gravity of 1 009 or 1 010, and yet the urine contained a considerable quantity of sugar These have been mixed cases of diabetes insipidus and diabetes mellitus They are proven to be mixed cases by the fact that when the patient is put under proper dietetic treatment, the sugar disappears, but the quantity of urine keeps up I myself do not attach so much importance to the specific gravity as is done by certain medical men

In testing the urine for sugar, my opinion is that the copper test is by far the best As we all know, Fehling's solution is the test generally employed, but there is this disadvantage about the Fehling's solution, it does not keep well, after being kept some time, it throws down a precipitate without the

presence of sugar This had led to many mistakes in diagnosis I have frequently had patients sent to me with the statement that they were suffering with diabetes mellitus, when the only trouble was that a faulty Fehling's solution had been employed Some years ago, I directed my attention to the question whether or not the ingredients of the Fehling's test could not be put together in the form of a pellet, and the solution be made as required Certain difficulties were experienced at the outset, but these have been overcome The pellets, as now made, consist of sulphate of copper in the anhydrous form, Rochelle salt, and potash It is necessary to separate the sulphate of copper from the potash This is done by first putting in the die the sulphate of copper, then a little Rochelle salt, next the potash, and, finally, more Rochelle salt The pellet, after being made, is surrounded with waxed paper and kept in a well stoppered bottle If properly prepared and handled with care, the cork not being left out of the bottle, these pellets will keep indefinitely There is this advantage about the pellet—it will never deceive you, for if it is allowed to absorb moisture, it at once becomes unfit for use, the oxide of copper being thrown down in the form of a black precipitate

In the treatment of diabetes, I attach the greatest importance to diet I do not consider that you can get on with the management of these cases unless you exclude as far as possible those principles of which there is a faulty assimilation If sugar appears in the urine, it must previously have existed in the blood I know from frequent examinations that the blood contains a *trace of sugar*, which may be represented in figures as from 0 5 to 0 8 part per 1000 In harmony with this condition of the blood, there has been a trace of sugar in the urine

The ammonia cupric test is the one I employ as a quantitative test It consists of Fehling's solution with the addition of ammonia With the Fehling's solution there is, on the addition of saccharine urine, a precipitate of the suboxide of copper, and, for quantitative purposes, this precipitate interferes with the determination of the exact time when complete reduction has taken place While the presence of ammonia does not interfere with the reduction, it keeps the reduced suboxide in solution, and we get the decoloration without the formation of any precipitate whatever The addition of ammonia gives a more intense blue color to the Fehling's solution, and this is brought by the reduction to the color of water without the formation of any precipitate With the apparatus in perfect order, the quantitative determination can be made in two or three minutes This test is so delicate that ordinarily, to perform it satisfactorily, you have to dilute the urine 1 20, and where it contains much sugar, 1 40 I usually determine the proportion of sugar per thousand of urine, but if it is desired to determine the number of grains per ounce, this can be done by multiplying the quantity per thousand by 0 4375

In examining the urine of a diabetic, I generally desire that a night and a morning specimen be brought When a person lives as people ordinarily live in England—that is to say, taking a meal on rising in the morning, breakfast, a meal in the middle of the day, lunch, and a meal in the early part of the evening, dinner—the urine passed on going to bed contains considerably more sugar than the urine passed in the morning When a person dines in the middle of the day and sups shortly before going to bed, then the conditions are reversed—there is less sugar in the night water than in the morning water Over and over again, by the quantitative examination of the urine, I have detected errors of diet where the patients have had the greatest desire to keep to what was right A person who has been passing only a little sugar, brings a specimen which contains a large quantity of sugar Under such circumstances we must look for some error in the preceding meal In one case this proved to be blanc mange which had been made with corn flour Blanc mange for the diabetic should be made with cream and gelatine or isinglass In another case a patient had been passing very little sugar, when suddenly the quantity increased Careful questioning revealed no error in diet, until it was learned that the patient had substituted for the bran biscuits which he had been using others said to be "just as good," which examination showed to be made of the whole meal I refer to these cases to show the value of the quantitative analysis

In the treatment of these cases, the exclusion of the carbohydrate elements of the food should be as complete as possible In the case of a person in the middle period of life, I first put the patient upon a strict diet Very often the sugar for a time lingers in the urine It is materially diminished, but has not disappeared I may also say that I have, in addition, recourse to opium, codeia, or morphia, for I believe that these drugs have an important influence in controlling the disease—or, to put it in other words, they restore the assimilative power Certain it is that under the influence of these drugs and strict diet, sugar after a time disappears from the urine, and after the urine is kept free from sugar for a few months, I find that the individual has a certain amount of assimilative power over the starch of bread I test this by giving him a couple of ounces of bread Frequently there is no reappearance of sugar If there is no return after this has been continued two or three weeks, I increase the quantity to three ounces per diem Then, if there is no return, to four and one half ounces, and finally, to six ounces Then the person is in the position of a small bread eater I recommend persons to be content with that They can very well give up potatoes and sugar, but to give up bread is a serious matter with many people When a person can take six ounces of bread per diem he is not in an unfavorable condition Many of these persons can continue to take this quantity of bread with no return of sugar in the urine If, however, they go further and resume their ordinary diet, there will be a reappearance of sugar The urine must be taken as the guide Treating the case in this way, my experience is that, after the middle period of life, these patients do exceedingly well

I must apologize for the crudeness of these remarks, for I have had no time for preparation I thank you most heartily for the attention which you have given to me I cannot close without thanking you and your countrymen for the cordial reception given to myself and my confrères by everyone with whom we have come in contact

DR JAMES TYSON said It is needless to say how much indebted we all feel to Dr Pavy for his remarks, and in the brief time allowed for discussion I desire first to say that I think we, in America, have passed through much the same transition in our views as to the import of albumin in the urine as has taken place in England The fact is thoroughly recognized that albumin may be present without any serious import, but the explanation of these curious albuminurias is still unsatisfactory There are a certain number of them which are clearly the result of diet, and may be called alimentary albuminurias, but that all cases cannot be thus explained is shown not only by the cases alluded to by Dr Pavy, but also in such as those where the urine on rising is free from albumin, but in which within an hour afterward the urine passed is albuminous, although no breakfast has been taken The crucial test for the determination of the gravity of an albuminuria is the presence or absence of casts I have found that in these harmless albuminurias tube casts are invariably absent, and where there is a constant association of albumin and tube casts, it, of course, means renal disease, no matter how slight the general symptoms may be

With reference to sugar, we also entertain much the same views In my hands Fehling's solution has proven the most satisfactory test, although open to the disadvantages alluded to by Dr Pavy Much, however, may be done to preserve it, if the bottle is kept corked and in a dark place, the solution will keep for a much longer time I have also obtained satisfactory results in this respect from a Fehling's solution in which mannite was substituted for the tartrate of potassium and sodium I have found that the pellets made in this country rapidly spoil

In reference to the treatment, we largely agree I am inclined to believe that certain sugars, and especially certain fruit sugars, are better managed by the diabetic than are others Thus, I think that a patient may eat an apple, or even an orange, without much disadvantage, whereas the use of grapes is always attended with an increase in the quantity of sugar The same is true of milk sugar I am satisfied that milk is a good diet for most diabetics, although, of course, it is not a cure The dietetic treatment is, for the most, efficient, but, so far as my experience with drugs goes, I am satisfied also that the preparations of opium, and especially codeine, are the most efficient adjuncts to the dietetic treatment They are, however, open to the objection that they produce constipation, which almost always aggravates the other symptoms of diabetes

DR J W HOLLAND said The remarks of the previous speaker have reminded me of my experience with glycerine as an organic medium in Fehling's solution This makes a solution which keeps for a considerable time, although not indefinitely At the Jefferson College laboratory we employ two solutions of definite strength, one containing the sulphate of copper, and the other Rochelle salt and the caustic potash or soda These are mixed in equal quantities when it is desired to employ the test

In the use of Dr Pavy's quantitative test, I find one small objection—which can be obviated by extreme care—that is, if the solution is boiled in an ordinary capsule the ammonia will be driven off and reoxidation of the copper follows If a flask is employed the ammonia will not escape so rapidly

One form of pellet lately brought to my attention is the indigo carmine pellet This seems to keep indefinitely It is composed of sodium carbonate and the sulphindigotate of sodium It is a very sensitive test—even more sensitive than the Fehling's solution

Dr KLEEN, of Karlsbad, was introduced, and said I had, two years ago, under my care at Karlsbad, a most singular case Mm X, of Gothenburg, fifty years old, then consulted me, telling me she was suffering with diabetes that the illness had accidentally been discovered the year before and that she had then visited Karlsbad (1884) and consulted Professor Seegen (who since that time had retired from practice)

Mm X when I saw her, presented no symptoms of diabetes or of any other illness, except some nervous debility I gave her a considerable quantity (100 grams) of cane sugar, collected the urine for some hours, and afterward for twenty-four hours, but found no glucose in it I did not succeed better after she had dined copiously on rice and other amylaceous food I then pronounced her free from diabetes I still kept the case under observation, however, and at last found, upon examining the urine two hours after a meal, which had ended with a large portion of sweet fruits (mostly pears), a small quantity of reducing substance Both Fehling's and Nylander's (bismuth) solutions showed reactions corresponding to the one we got, with urine containing 0 1–0 2 per cent of glucose When testing the urine with polarization by the spectroscope, I found, to my utter surprise, a slight deviation *to the left* The urine did not contain a trace of albumin I was at a loss what to think of it, and submitted it to the test of fermentation The same day, however, I received a letter from Professor Seegen, stating that when the patient was under his care, her urine had contained much larger quantities (as much as 3 per cent) of reducing substance, and that he had found that substance to be *levulose* At the same time Professor Seegen sent me a supply of glucose, asking me to submit the patient to a test of her toleration of that substance So I did, and found that portions of 100 grammes or more did not produce more than very small quantities of reducing substance in the urine—that substance, to judge from a very slight deviation to the left in a good instrument, being levulose

Worm-Müller has proved that glucose, administered in large doses, passes to a certain (small) por-

tion unchanged into the urine, even in healthy persons, while it passes to a much larger proportion into the urine of the diabetic patient He has also found that all the different species of sugar, administered in large doses, in a certain (small) proportion pass *unchanged* into the urine even of healthy persons, while in the diabetic patient at least some portion of them passes into the urine *tranformed into glucose* He believes in this latter circumstance to have found a difference, also, between persons suffering from real diabetes and those whose urine, while under ordinary diet with the common reagents, presents traces of glucose or only now and then, under peculiar circumstances and in a passing manner, contains somewhat larger quantities of it

This coincides with my own experience so far as it hitherto goes Like all physicians who occupy themselves with researches in this direction, I find every year persons whose urine shows traces of sugar, and now and then—especially after strong emotions, after alcoholic excesses, or after very rich meals of rich food (but, generally, not after meals *exclusively* consisting of amylacea or of cane sugar) —in a passing manner, somewhat greater quantities of a substance which shows *all* the qualities of glucose In these doubtful cases, I usually give a large quantity of cane sugar, and afterwards often find no glucose—or only slight traces of it—in the urine, till I have boiled it with mineral acid, and thus converted a portion of the cane sugar that has passed over into glucose, whereupon I will find the well-known reaction of glucose I consider these cases to be distinct from true diabetes, though it seems to me highly probable that they indicate a tendency to that disease, which others of larger experience than myself have also noticed—for instance, Professor Frerichs

In the present remarkable case of levulosuria, I found that some portion of cane sugar passed unchanged into the urine It seemed to me to be of great interest to find out how Mm X reacted against the other species of sugar, especially against levulose, which, with some reason, could be expected to pass over in larger proportion than in quite normal persons I therefore had the wish to administer a large amount of honey (which is a mixture of glucose and levulose), and also to make a test with milk sugar, but Mm X, who had heard that she should avoid sugar above all things, and who had an interest in her own case, only partly of the same nature as my own, did not wish to be submitted to further experiments, especially as I could not promise that they would be without some momentary influence on the urine I can, therefore, only give the above description of the case, such as is already given by Prof Seegen, who first discovered it, but I am not without hope of being able in the future to give fuller information upon it

I am decidedly of the opinion that the case is not, clinically speaking, strictly one of diabetes If the substance had been glucose, it would have ranged among the large number of the above named glucosurias, continuing unchanged for a great number of years in healthy or nearly healthy persons I was rather astonished at seeing Professor Seegen state that the urine once contained as much as 3 per cent of levulose, but cannot doubt the accuracy of this most excellent observer That the quantity has diminished so very much without any dietetic treatment, makes the case even more interesting than it otherwise would be I allowed Mm X a tolerably good supply of starchy food, advised her only to avoid excessive use of them, and I have lately heard that the urine only now and then contains small quantities of reducing substance

AMERICAN GYNÆCOLOGICAL SOCIETY

Twelfth Annual Meeting, held in the Hall of the Academy of Medicine, New York, September 13, 14 and 15, 1887

(*Continued from page 505*)

SECOND DAY—MORNING SESSION

The President in a few remarks called attention to the death of Dr John Scott, of San Francisco, Cal, and appointed Dr Thomas Addis Emmet to prepare a memorial for the published Transactions

DR C D PALMER, of Cincinnati, read a paper on

THE THERAPEUTIC VALUE OF SOME MEDICINES IN THE TREATMENT OF HÆMORRHAGIC CONDITIONS OF THE UTERUS

The author referred to the fact that very few papers on the medicinal treatment of hæmorrhagic affections of the uterus appeared in the eleven volumes of the Transactions of the Society In hæmorrhage from the uterus, it is important to remove the cause where this can be found The object of the paper was to speak of the value of certain internal remedies and their field of utility

No drug is more frequently used than *ergot* This is beneficial in many cases, but may aggravate some It is of service in chronic hyperæmia and in subinvolution Its effects are less marked in nulliparæ than in multiparæ In the treatment of uterine fibroids, between the use of galvanism and of ergot, the field of laparo hysterectomy must be a limited one The hæmorrhage from fungoid degenerations and from ovarian irritation is better met by other remedies In some cases of pelvic peritonitis and pelvic cellulitis, the hæmorrhage has been increased by use of ergot

Digitalis in appropriate cases is of service It is reasonably reliable in uterine hæmorrhage due to cardiac trouble In atonic conditions of the circulation, weak heart and low arterial tension, which tend to induce passive hyperæmia, digitalis may be used

Cannabis Indica has been the subject of diverse claims The drug varies much in strength It acts more especially on the nervous system Its indications are imperfectly defined and its effects uncertain

Bromide of potassium is useful in certain hæmorrhagic states It is indicated where there is sexual excitement and ovarian congestion and irritation

It is not so useful where hæmorrhage is due to uterine irritation, although in some cases of fibroid tumor the author had found it more useful than ergot

Arsenic is of service in uterine hæmorrhage It is not prompt in its action, but in appropriate cases it is effective It acts as a tonic, stimulating all the functions, and especially those of the skin and mucous membrane In chronic endometritis, with or without fungoid degeneration, a course of arsenic will be of material service It is of value in the case of young girls when menstruation appears too frequently and continues too long In menorrhagia at the time of the climacteric it is of service, although its effect is less decided than in the former group of cases Arsenic is a good remedy in menorrhagia of malarial origin

Gallic acid is the best representative of the astringent class of remedies, and has been repeatedly tested in hæmorrhage due to uterine atony Its large dose, unpleasant taste and tendency to disorder digestion limit its use

Active cathartics, particularly so-called cholagogues, as mercury, are useful in uterine hæmorrhage of hepatic or splenic origin

Viburnum prunifolium, hydrastis and gossypium have been recommended Dr Garrigues has reported 139 cases of uterine hæmorrhage form various affections in which he used gossypium with the result of relieving the hæmorrhage in 125 cases

The last remedy referred to was hamamelis virginiana If thoroughly tried this is usually efficacious The author had used this drug with satisfactory results for six or eight years It is not equally potent in all cases of uterine hæmorrhage For active, profuse hæmorrhage, it is inferior to ergot, but for slight, long-continued flux, when the blood is dark and venous, the hæmorrhage being passive in character, it is the remedy *par excellence* The best preparation is the officinal fluid extract in doses of a few drops to 2 drachms None of the remedies here mentioned were intended to supersede local medication where indicated

DR FORDYCE BARKER, of New York, remarked that every one of the remedies mentioned is of special value in certain cases, and success in treatment depends upon a careful selection of the cases Arsenic is useful when the system is broken down and the patient is approaching the climacteric Where the hæmorrhage continues and is profuse, the most valuable remedy is the fluid extract of hydrastis combined with fluid extract of hamamelis, ½ drachm of each being given He had used viburnum prunifolium largely in passive hæmorrhage occurring at an early period of gestation, and in threatened abortion

DR LLOYD ROBERTS, of Manchester, Eng, had very little confidence in any drug except ergot in the treatment of uterine hæmorrhage The great point in the use of ergot is to get a good preparation In cases of hæmorrhage at the menopause when the uterus is flabby, and in the case of young girls, the best results are obtained by giving it in the intermenstrual period

DR W BAILS-HANDLEY, of Melbourne, could not see how the remedies referred to are going to act in restraining hæmorrhage If their use is to be supplemented by operative measures, it is hard to say what does the good He had given ergot in fibroid tumors, but could not say that he had had the slightest benefit from its use

DR J A D GRANT (Bey), of Cairo, Egypt, said that two years ago he was called by a doctress to see a patient There was a tumor, and uterine hæmorrhage recurred every ten days The case had previously been diagnosed as fibroid tumor and removal of the ovaries recommended There was a history of syphilis, and as hæmostatics had been thoroughly tried for months, he decided to use mercury Stimulants and cinchona bark were also given The hæmorrhage ceased and the tumor, which was as large as a child's head, gradually diminished in size, and in three months the woman was able to return to work

DR H P C WILSON, of Baltimore, remarked that when he excluded cases of submucous fibroids, cases of granulations and cases of polypi, the number of instances of uterine hæmorrhage is very small He had very little confidence in any remedy as a hæmostatic in these cases

DR JAMES R CHADWICK, of Boston, referred to the value of turpentine He had used this in hæmorrhages from all causes with surprising results Ergot given between the flows is of more service than when given during the hæmorrhage During the flow he is in the habit of giving aromatic sulphuric acid

PROFESSOR DOLERIS, of Paris, France, made some remarks on

ALEXANDER'S OPERATION

He treats cases of retroversion of the uterus by shortening the round ligaments, where all other measures of treatment have failed Where there is retroflexion, he first overcomes the flexion by three or four forcible dilatations and then shortens the round ligaments In cases of prolapse, he first restores the uterus to a normal condition If the cervix is abnormally long, it is amputated and the round ligaments are then shortened Anterior and posterior colporrhaphy are also performed In cases of anteversion, there is no need to shorten the round ligaments, as the pressure of the abdominal contents does not come upon the uterus as in the case of retroversion In these cases the vaginal operation is sufficient The object of shortening the round ligaments is not to suspend the uterus, but to antevert it

DR WM L REED, of Glasgow, said that one of the most important points to which attention should be called is that even when a successful operation has been performed in a case of chronic retroversion, you must not expect the patient to feel quite well in the course of a few weeks All that the operation does is to restore the position of the uterus, it does not alter its condition The patient will probably be no better three months after the operation than before it, especially if care is not taken The after-treatment is most important If you take a case of prolapse with the uterus down to the woman's knees, shorten the ligaments and allow her to be about in

two weeks, you need not be surprised if the trouble is soon reproduced The patient should be kept in bed five or six weeks, and afterwards should wear a well fitting pessary for five or six months A pessary that before the operation could not be kept in place one hour will remain without difficulty after the operation

Dr A Martin, of Berlin, had not performed this operation, but should not object to performing it when a suitable case presented itself His experience led him to believe that we exaggerate the importance of prolapse He had seen many cases where the patient suffered this displacement without discomfort He did not think that an operation on the ligaments without restoration of the pelvic floor will give a certain hope that the uterus will be retained within the pelvis In these cases he performed Hegar's operation

Dr C C Lee, of New York, had done Alexander's operation about 19 times The operation is indicated in those cases where a pessary cannot be borne on account of the abnormal tenderness of the vaginal vault, although no distinct pelvic peritonitis or cellulitis can be detected It may be used in cases of retroversion of the uterus with chronic salpingitis which cannot be cured without laparotomy It is also to be employed in a limited class of cases where there is complete procidentia and where the usual plastic operations have failed to keep up the uterus

Dr Howard A Kelly, of Philadelphia, had done this operation for three years It is folly to expect a heavy uterus to be held over a large open canal by two ligaments If the cervix is hypertrophied it must be removed Suitable operations should be performed in the vagina. In the case of a heavy uterus the round ligaments, acting at right angles to the organ, are at a disadvantage when we attempt to raise the womb In one case, therefore, he had substituted hysterorhaphy with entire success

Dr Alexander J C Skene, of Brooklyn, then delivered

THE PRESIDENT'S ADDRESS

He first referred to the organization of the American Gynelogical Society, which occurred in the Hall of the Academy of Medicine, New York, twelve years ago The Society has passed its age of development and entered upon its period of growth The major portion of the time of this Society has been given to surgical subjects This should not be so As much attention should be elicited by the discussion of a functional affection as by the report of a case in which the surgeon has removed all the organs of the body with the exception of those absolutely essential to life There is room for more definite knowledge with reference to pathology and especially with regard to nomenclature There are still interesting fields to be explored and the greatest of these is with reference to preventive medicine Gynecology has much to accomplish in this direction Brilliant reputations have been made by the removal of the tubes but little has been done in the way of preventing the diseases which lead to their destruction In the present state of society more honor is accorded him who relieves the ills of man, than is given to the one who prevents them In obstetric medicine greater advances have been made in this direction Vesico vaginal fistula, which formerly were very frequent, have almost entirely disappeared under modern methods of obstetric procedure

Progress in gynecology would be hastened by improvement in the medical press In this country there is too much writing in proportion to the amount of thinking and practice *The most copious writers are not the most distinguished in practice*

Dr George Granville Bantock, of London, read a paper on

THE TREATMENT OF THE PEDICLE IN SUPRA VAGINAL HYSTERECTOMY

The surgical treatment of fibroid tumors of the uterus, has attracted a great deal of attention during the last ten years Considerable progress has been made in the last three years, mainly in the treatment of the pedicle In his first operation the speaker ligatured the pedicle, applied the cautery, split the pedicle into an anterior and posterior portion and brought these together with sutures The patient died four days later of septic poisoning It is a peculiarity of uterine tissue that it shrinks under strong pressure In this case the ligatures soon became loose and there was oozing into the peritoneal cavity In the next case the pedicle was tied in three portions and surrounded by a silvered copper wire and transfixed with two long needles It was brought into the lower angle of the wound Thirteen hours after operation there was a free flow of blood, which was arrested by the cautery On the ninth day, as the copper wire did not make sufficient pressure, a wire écraseur was substituted, and this succeeded in reducing the size of the stump As now performed the operation consists of surrounding the pedicle with a soft iron wire attached to a small écraseur by which the wire can be tightened Before cutting away the pedicle it is important to transfix it with needles to prevent the wire from slipping After the body of the uterus is removed, the pedicle is secured in the lower angle of the wound In some of the cases reported, the pedicle, which at the time of the operation was two or three inches in diameter, was reduced to one-third of an inch in diameter when the wire came off at the end of the eighteenth or twentieth day The author did not think the operation could be improvd by substituting the intra-peritoneal method of treating the pedicle Thirteen cases of pediculated fibroids treated by the extra-peritoneal method reeovered, while two treated by the intra-peritoneal method died

With reference to the after treatment of the pedicle, Dr Bantock said that if the pedicle is properly secured at the time of operation, the less it is interfered with the better The serre-nœud should not be touched in less than four or five days, unless there is oozing, in order not to disturb the adhesion of the peritoneum If there is bleeding it usually occurs within a few hours If the pedicle is thick, it may be necessary to tighten the wire When the

stump comes off the dry or wet method may be employed The former consists in dusting iodoform on the part The latter consists in washing the part with a solution of sulfurous acid, 1 9, and then applying equal parts of rectified spirits and glycerine

The author's statistics were as follows 57 cases of supra vaginal hysterectomy with 45 recoveries and 12 deaths In 5 of the fatal cases there was pronounced disease of the kidneys, in 1 there was acute enteritis, in 2 there was hæmorrhage, in 1 there was obstruction of the bowel, and in two septicæmia

AFTERNOON SESSION

DR JAMES B HUNTER, of New York, reported a case of *Acute Dilatation of the Stomach following Laparotomy*

DR A REEVES JACKSON, of Chicago, read a paper on

THE INTRA-UTERINE STEM IN THE TREATMENT OF FLEXURES

A large proportion of flexions of the womb do not need any treatment, others are wholly unamenable to treatment, while others are made worse by attempts at treatment The author began the use of the stem pessary in 1870 Previous to that time he had used dilatation of the cervical canal and incision of the cervical wall separately or combined The results were unsatisfactory All the cases thus treated relapsed The single symptom which was regarded as an indication for the treatment of a flexion was dysmenorrhœa

Details of the method—Having determined the presence of a flexion, a flexible olive-tipped bougie is introduced and allowed to remain from two to ten minutes according to the amount of irritation produced This is repeated at intervals of from one to three days The size of the bougie is gradually increased This treatment is continued until tolerance is induced, then, at the close of a menstrual period, a soft rubber stem, one third of an inch shorter than the uterine canal and of a size that can be readily introduced, is passed into the uterus and maintained in position by a tampon soaked with glycerine The tampon is renewed after two or three days and is repeated as long as there is any tendency for the stem to slip out This soft stem should be worn six or eight weeks when it should be replaced by a larger stem, and in six or eight weeks a still larger one As soon as the womb can be readily straightened a more rigid stem should be employed This should be of vulcanite The pessary should not be such as will stretch the internal os, but above this point, it may with advantage have a bulge In a few cases it was not found necessary to resort to the stiff instrument The hard stem is worn continuously for three months It is then removed for a week or ten days If there is then found a tendency to return to the former condition, the stem is again introduced and worn for another period of three months The essential principle in this plan of treatment consists in its gradual conduct The uterus must be coaxed and forced into proper shape Any method of treatment which involves the rapid removal of the flexion is dangerous and not liable to be of permanent benefit In no instance has inflammation followed the use of the stem When the flexion is maintained by adhesions or where there is evident inflammation, the stem is not to be employed The stem has been used by the author in 67 cases, 43 married and 24 unmarried 9 of the former had born children and 8 of the latter subsequently became pregnant 41 of the cases were cured, 5 improved and relieved of dysmenorrhœa and in 20 the result was not known

DR OGDEN, of Toronto, said that after the uterus is accustomed to the presence of a foreign body, the stem pessary is calculated to do a great deal of good To retain the stem in position he uses dry non absorbent cotton dusted with boric acid in preference to the moist cotton This can be left in three or four days

PROFESSOR LAWRENCE, of Bristol, Eng, stated that his plan had been similar to that of Dr Jackson He used the stem in selected cases where the only cause of the dysmenorrhœa is the bent condition of the uterus He related the following case A married woman aged 35 years, was sterile and suffered with dysmenorrhœa and inter-menstrual hæmorrhage After wearing the stem for two months the bleeding ceased and the dysmenorrhœa disappeared In six months he removed the pessary and the woman became pregnant

DR G APOSTOLI, of Paris, France, read a paper on

THE TREATMENT OF UTERINE FIBROMATA BY ELECTROLYSIS

The author described in detail the method of treating uterine fibroids, which he had recommended He had found electrolysis successful in checking the growth of the tumor and in decreasing its size He does not regard the plan of treatment as dangerous, having lost but 2 patients out of 200 cases, and in these instances death was not directly attributable to the operation He has also used this method for the relief of nervous pain in hysteria, employing the constant current, long continued This also relieves pain associated with effusion In 4 cases galvano puncture per vaginam has cured ovarian cysts after the treatment has been continued two years

Dr James R Chadwick, of Boston, read a paper on *Ventral Hernia after Laparotomy, and Its Surgical Treatment*

(To be concluded)

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, May 18, 1887

THE PRESIDENT, JOS TABER JOHNSON, M D, IN THE CHAIR

DR C V BOARMAN read a paper entitled

PUERPERAL TETANUS

(See p 522)

DR T E MCARDLE said that Dr T C Smith had recently, in another Society, reported a case following abortion, and that in the discussion which fol

lowed several other cases were mentioned, one of which followed childbirth

Dr W H Taylor inquired if the symptoms in this case were those of regular tetanus or of one form of puerperal fever? Were the spasms clonic rather than tonic? In short, are the symptoms the same as those of traumatic tetanus?

Dr Boarman replied that they were He has seen six cases of traumatic tetanus, and the symptoms in this case were just the same In fact, traumatism was probably the cause The patient was a well formed woman, but ergot had been freely given, three men had worked to deliver her At the end of the first day there were symptoms of puerperal fever which, however, lasted only a few days, when convalescence began At the end of the seventh day there were symptoms of approaching tetanus, and on the morning of the eighth day there was trismus, opisthotonos and the risus sardonicus The mind was clear

Dr W H Taylor did not think that this was the usual course pursued by puerperal tetanus Trismus is usual before opisthotonos In this case the patient was first dosed with ergot, but tetanus usually follows injury to the cervix Some days after this other symptoms followed, and for this reason he would hardly call this a case of puerperal tetanus The clonic spasm is not a necessary concomitant of puerperal tetanus

Dr J E Morgan in 40 years has seen but one case of puerperal tetanus, and that was about a year ago He was called by the gentleman in attendance and found the woman with tetanus He made only the one visit The woman died

Dr Kleinschmidt remarked that there was one factor in the case reported by Dr Boarman which made it interesting—viz large doses of ergot had been given What had this to do with the subsequent tetanus? It is well known that ergot will render the spinal column anæmic Possibly this is what happened in this case, and the anæmia continuing after the expulsion of the child, the spinal nervous system would be in a condition to explode after any peripheral injury Some authorities state that tetanus is not due to excitation of the spinal column, but to excitation of the sympathetic system In his opinion the sympathetic system is not as important as we are apt to think it, and at any rate, the sympathetic nerves have been traced to Clark's column in the spinal cord The sensory nerves of the uterus are of a low degree This dulness may explain the rarity of tetanus after an injury during labor, but with the spinal cord in an anæmic state, less irritation than usual was required to excite it into a fatal action

Dr Boarman said that the midwife gave probably about ℥ss of ergot during the night The womb was rigidly contracted, which accounted for his not being able to deliver He thought Dr Kleinschmidt's theory very plausible There was most likely abrasion by the instruments, and the tetanus was just as after any traumatic injury

Dr McArdle asked Dr Boarman how he accounted for the decomposition of the child and why, with a dead child, was Cæsarean section thought of?

Dr Boarman replied that the child was decomposed long before he saw it, and probably before labor began The fœtus was so rotten that in attempting to deliver, the whole arm, with the clavicle and scapula, came off in his hand The woman's people were not asked to choose between embryotomy and Cæsarean section, but they were told that either one of them had to be done and they very promptly forbade Cæsarean section

Dr S C Busey remarked that it was very fortunate that Cæsarean section was not done, as the woman would probably have died under it The improper administration of ergot makes the case especially interesting There are, however, many cases in which the drug has been administered improperly without being followed by tetanus, so if it was an agent at all it was a very remote one We have in this case the conditions usually causative, viz traumatism, perhaps not any more than is common after such manipulations, bad hygienic surroundings, and in addition a putrescent fœtus, puerperal fever in a few days and erysipelas in the immediate neighborhood Everything points to sepsis, and that he believes is the most common cause of tetanus We will have to fall back upon the theory that there is some individual idiosyncrasy which promotes tetanus He was glad to have Dr Kleinschmidt endeavor to account for the part played by the ergot, but we want some coincidences of puerperal tetanus and ergot before we can judge of its agency

Dr Kleinschmidt said that he admitted that the tetanus was traumatic, but he was trying to get the central nervous system in a condition in which slight excitation would produce it It was, he said, only *probable* that the ergot acted as he explained

Dr Boarman said that there was no room for doubt as to the nature of the case All the symptoms of tetanus were present Dr Busey's explanation of its cause was probably correct Schroeder makes the same statement The patient had been in labor long before he saw her, and her hygienic surroundings, at first, were of the worst, but he removed her, as soon as labor was over, to more airy quarters The case of erysipelas was moved as far away as possible He used carbolic acid and bichloride of mercury douches

FOREIGN CORRESPONDENCE

LETTER FROM PARIS

(FROM OUR OWN CORRESPONDENT)

Glaucoma—Iridectomy in Detachment of the Retina—Seltzer Water for Burns—Examination of the Urine in Diagnosis of Alcoholism—Chloral in Puerperal Eclampsia

In a critical review of Schnabel's work on "Glaucoma," Dr Fano, in the *Journal d'Oculistique*, remarks that the greater number of ophthalmologists continue to admit that every affection of the eye, in which the tension of the organ is augmented, is a

glaucomatous affection They persist in taking the *effect* for the *cause*, and they thus comprise under the generic name of glaucoma diseases essentially different one from the other They confound certain cases of irido-choroiditis with plastic suffusion in the vitreous body (true glaucoma), and certain forms of atrophy of the optic nerves accompanied by hypersecretion, or rather by a slackening of the work of the absorption of the intra-ocular liquids (false glaucoma) They arrive at compromising and discrediting an operation, that of iridectomy, so efficacious in true glaucoma, so powerless in false glaucoma The work published by Schnabel, Dr Fano states, is a refutation of the doctrine of glaucoma admitted by the greater number of ophthalmologists, to wit that the affection is caused by an occlusion of the filtrating passages of the irido corneal angle of the anterior chamber, on the grounds that there exist certain cases of glaucoma without this occlusion, and there are cases of occlusion without glaucoma On this theory was founded a most singular therapeutic remedy—the drainage of the eye Dr Fano approves of the proposition of the above-named author, viz that the cure of glaucoma by iridectomy is not due to the operation producing a filtrating cicatrix, which latter condition Dr Fano considers an anatomo-pathological heresy He also considers that glaucoma is not due to excavation of the optic papilla nor to an augmentation of the intra ocular tension, as, if there are a great number of cases in which may be found a particular excavation of the optic papilla accompanied by an augmentation of tension of the globe of the eye, there are other cases in which this excavation does not exist, although the eye be more distended, whilst in others again, there exists an excavation of the optic papilla, without the tension of the globe of the eye being augmented

While on ophthalmological subjects I may here note another important question treated by Dr Fano, viz the value of *iridectomy in the treatment of detachment of the retina* According to the author, whose opinion is entitled to some respect, this affection is not an idiopathic lesion It is the consequence of a choroiditis, as there are serous or sero-sanguinolent effusions in other parts of the body constituting œdemas and dropsies, so there may be in the sub-retinal region In the latter case, the effusions are the result of an obstacle in the venous circulation of the choroid To attack by divers operative procedures simple puncture, or puncture followed by irritating injections, drainage of the retinal sac, detachment of the retina, is to combat the effect, without suppressing the cause of the malady In performing iridectomy we effect a local bleeding, in the neighborhood of the diseased part Iridectomy, the author adds, is an antiphlogistic treatment directed against choroiditis, which treatment is founded on the ground of the anastomoses which exist between the blood-vessels of the iris and those of the choroid If this expedient should succeed in arresting the progress of the choroiditis, the sub-retinal effusion will be resorbed, if the inflammation of the choroid is not arrested in its progress, the effusion will subsist, or even increase

In a paper read before the Medical Society of Nantes, Dr Dubois, of Villers-Bretonneaux, stated that in several cases of extensive and superficial burns, he discovered a means of almost instantaneously arresting the pain arising therefrom This consists in slowly and continuously pouring over the affected part the contents of a syphon of Seltzer water In one case the doctor, by way of experiment, replaced the Seltzer water by a stream of cold pure water, but the pain, which had been subdued by the former, recommenced, and disappeared again when it was reapplied Dr Dubois explains this effect by the combined action of cold and of the carbonic acid He does not, however, ascribe to this remedy a curative effect, but maintains that the recovery may be accelerated by this application Moreover, besides its efficacy, this remedy recommends itself by its simplicity

At a recent meeting of the Société de Biologie of Paris, Dr A Robin read a paper illustrating the utility of the examination of the urine as a means of diagnosis in alcoholism He was directed to this subject by the history of the case of a patient (a lady) who was laboring under symptoms of alcoholism but, owing to her social position, the diagnosis was rather difficult to establish This, however, was effected after the examination of the urine, which revealed the following characters Excessive diminution of the solid materials (9 grams for 950), diminution of urea (0 790), and of the nitrate total (1 gram 072), augmentation of the relative proportion between the produced and the normal phosphoric acid All these characters constitute a syndrome which the author had met with in other alcoholic subjects On minute inquiry being made after examination of the urine, it was ascertained that this lady absorbed from 300 to 400 grams of alcohol per day

In the treatment of puerperal eclampsia, Dr Du jardin-Beaumetz prescribes chloral, from 8 to 12 grams per day It is administered by the rectum or by the stomach, but the preference is given to the latter, and he recommends that 1 gram of the drug should be given every hour until the desired effect be produced The author vaunts this remedy as being the most efficacious he has ever found in the treatment of this affection A B

BUDAPESTH

The University of Budapesth — The Hospitals — Hysteria from Forced Sexual Intercourse—Cottage Hospital—Professor Koranyi

This city, which is not difficult of approach from Vienna, is well worth a visit from medical men, who pass any time at all in Vienna The situation of the city is a fine one, on both sides of the Danube, being really two cities, under one government Buda or Ofen, on the south side of the river, and Pesth on the opposite shore Buda is on a hill and has the imperial residence, and from here magnificent views can be obtained of the river below and Pesth and the plains extending beyond The trip on the river be-

tween Budapesth and Lintz, some distance north, is one that will well compare with any sail in Europe The city, and, ordinarily is meant that part called Pesth, has some fine streets and buildings, notably Radial street, lined by handsome villas, and terminating in the park, horse cars and all the conveniences and luxuries necessitated by a thriving city of half a million inhabitants One of the buildings that most interested me, was that used as the headquarters for the distribution of the well known aperient water Hunyadi Janos

The University here, has about 3000 students connected with it about 1,100 belonging to the medical department, 1,500 with that for the law, and the remainder being connected with that for philosophy, philology and kindred branches

We visited three hospitals under the guidance of my friend Dr Hirschler, a native of the city All these hospitals had been built within five years, thus all having the very best and latest methods of ventilation, sanitation, heating and arrangement for work the first hospital, that for medical cases seemed almost perfect to me, who had just come from the ill adapted wards of Vienna, with their wooden floors and wooden beds and the like Here the wards were not large, the floors made of tiles, and the walls so constructed that they can be easily washed each bed, they are all simple and made of iron, have what seemed a very generous amount of cubic feet of air, allotted to it and the beds, each with its neat little table, were so arranged that much of the grim hospital look was lost Here was one of the very best cases of argyria ever seen, due to previous maltreatment

Perhaps the most interesting case, was one of hysteria in a young woman of 22, the effect following a forced sexual intercourse by her father She was a person of full average intelligence, but now more or less inclined to silence and gloominess There was complete anæsthesia in the entire left side of the body, skin, conjunctiva, mucous membranes, vagina and soles of the feet, with hyperæsthesia in the other half It was on this patient that I saw the most successful results of hypnotism I go into this case more or less fully, because of the impression made upon me, after the unsuccessful, or only partly successful results that I had hitherto seen, not then having seen the master, Charcôt Under the influence of Dr Hirschler, by simply concentrating her gaze upon a lead pencil, held before her eyes, she was put under the hypnotic conditions The sleep, in its beginning and continuance, seemed natural as may at any time be ordinarily observed When completely hypnotized, all the *muscles* were firmly contracted, and as the saying goes, "she was as stiff as a board " She could be held by the head and heels, in a perfectly straight and stiff position, with no support to her back, and her limbs, when forcibly placed in any position, no matter how strained or unnatural, would remain in that position When the arm was moved in any direction, the leg of the *same* side assumed a similar one, and the corresponding eye had nystagmus in more or less the same direction She had perfect control over every muscle, and movements of coordination were well performed at the instigation of Dr H He would simply say, "Now, Marie, *do*" this or that, and she would carry out what his words suggested, no matter how ridiculous or unnatural When told that there were hens in the room, she shook her skirt at them, when a dog was spoken of, she shrunk back, at the statement that her friends had come she stepped forward, smiled and extended her hand The gestures and emotions of surprise, *horror* and astonishment were all performed at the corresponding suggestions She answered questions that were asked her correctly, gently rubbing her throat caused her to sing, drawing the skin about the eyes into wrinkles brought out sad and mournful notes, and words that were translated to me from the Hungarian as those of one of their plaintive hymns, pulling up the corners of the mouth caused lively notes and gay words Finally, an interesting test was made Several pieces of blank paper, about the size of cabinet photographs, were handed to her, on one of which was a blot of ink She was told that they were photographs of different people she knew, and she was to pick out a certain doctor whose name was mentioned With her eyes still closed, she gazed at each one as she went through them, till she came to the *one specialized by* the blot, this she kept longer than the others, and started as if to give it as the desired one, she hesitated and put it under the others and continued through the pile, but soon went back till she had found this blotted paper, and after gazing at it, more or less intently, handed it to Dr H After this he simply blew upon her face and she awoke, exactly as if from a natural sleep As soon as she saw me, she began to cry, *not having seen me before she was hypnotized* For a while she acted as one more or less dazed after a heavy sleep

There is a fine laboratory connected with the hospital, with every convenience for chemical, pathological and bacteriological work Before leaving the hospital, I had the pleasure of making the morning visit with Professor Koranyi, chief of the clinic We then visited the children's hospital, one of the best appointed and finished hospitals one can find

Still further out from the city is the newest hospital, on the cottage plan, one building being given up to the homœopathic belief Among the other admirable arrangements were the bathing facilities, besides the ordinary ones, there were two large tanks for swimming purposes, so arranged that water of any desired temperature can be supplied Patients are ordered these swimming baths as part of their treatment

There are two obstetrical and gynecological clinics, one of 60 beds and one of 40 beds, where on the average there are 500 births and 200 gynecological operations a year

Any physician having the opportunity, will find a visit to Budapesth full of interest, and the medical profession, so far as I met them, very cordial and entertaining GEORGE W NASH

DOMESTIC CORRESPONDENCE

THE TOBACCO POISON

Dear Sir —The remarkable case of irascibility or mental disorder from tobacco, reported by Dr Batten, is not so exceptional as it seems, for I know a similar instance in which the fumes of tobacco irritated the brain and mind to such a degree that the afflicted gentleman is so forcibly impelled to assault the offending smoker as to require a very decided effort on his part to resist the impulse thereto Many a time he has prevented himself from doing so only by hastily turning and going away from the transgressor Indeed, for the time being, he feels like killing the smoking offender, a lamentable state of mind to be artificially induced by an extraneous toxic agent, especially one in such common use as tobacco Nothing else affects him so but tobacco, hence he is obliged to keep away from those who smoke altogether, which is a very difficult thing to do, as they intrude almost everywhere, smokers seeming to be under the false impression that they have a right to diffuse this powerful tobacco poison and afflict people at pleasure He is thus frequently in danger of involuntarily committing a crime for which he will not be responsible, as the disposition thereto is impulsive, otherwise he would never think of such a thing as an assault, much less murder, his soul revolting at the thought, being a respectable, temperate, peaceable citizen, with no disposition to do wrong or harm any one, using no stimulants, not even coffee, as it gives him neuralgia and increases his susceptibility to to bacco But worse still, this temporary excitement of mind from tobacco smoke is followed by prolonged mental depression with disposition to suicide, so that he has to keep out of the way of razors and other harmful articles, for fear that in some weak moment, he might use them to his own destruction This is a terrible life to lead, from no fault of his own either, but caused by the vicious action of other people in using and diffusing a poisonous nicotian agent, which is entirely preventible, by avoiding the smoking of tobacco altogether, or at least in public

From this, and other evidences to the same effect, which might be adduced, it is probable that the use, or exposure to the fumes of tobacco, is an occasional occult cause of quarrelling and fighting, or even murder, and a frequent source of dejection, hypochondria, melancholy, and suicide, so common, as well as nausea, vomiting, dyspepsia, biliousness, headache, neuralgia, neurasthenia, and other nervous, cerebral, and cardiac affections, malaise and systemic prostration, ill health of various kinds, with slow or sudden death, for there is no doubt that some, at least, of the many sudden, as well as lingering deaths, are from this nicotian poison, tobacco heart, depression and cachexia, or nicotism, like alcoholism, being very frequent These are only some of the fearful penalties that susceptible persons have to pay for the indulgence of smokers, who inflict this baneful tobacco poison upon them without regard to their health or right to be exempt from this with every other other noxious agent or injury, for which they should be severely punished, and the smoking of tobacco prohibited by law in all public places Tobacco smokers should be obliged to keep the poisonous smoke to themselves, as it is selfish, cruel and criminal to inflict it upon those who wish to be free from its pernicious influence Instead of the victim apologizing to the offending smoker for his artificially induced nicotian irritability or mental derangement, as in Dr Batten's patient, the apology is not only due from the smoker for poisoning him, but he is criminally liable for the offense, as he has no more right to compel him to inhale the collective nicotian principles in the form of smoke, than he has to force him to take the most active poisonous constituent—nicotia—separately, or to thrust solid, powdered, and liquified tobacco, or other poison, into his mouth and nostrils

The deleterious effects of tobacco upon the human organism are well known It is particularly obnoxious and penetrating in the form of vapor or smoke, especially to susceptible people, as there is a very large number of impressible, nervous, sensitive, enervated, feeble, ill and sickly persons—men, women and children—who are more or less seriously discommoded, sickened, and injured, or killed directly or indirectly, thereby, and no one has any more right to pollute the air with this pestiferous tobacco miasm or smoke than with chloroform or other poison, and compel people to breathe this potent malaria of tobacco, to the damage of health, mentality, morality, an often danger or destruction of life itself It is a very serious offense, indeed a grave crime, for any one, by means of this noxious nicotian miasm, as with any other baneful agent, to change or derange the mental and moral with the physical nature or disposition and entire being of others to their detriment, and make them vicious and criminal, infuriate, exciting to assault and murder, despondent and disposed to suicide, as well as diseased and shortlived, when otherwise they would be amiable and benevolent, exemplary and decorous, cheerful and happy, healthy and longlived

GEO J ZIEGLER, M D

Philadelphia, Oct 1, 1887

PREVENTIVE TREATMENT

Dear Sir —In THE JOURNAL of October 1, 1887, I notice a paper entitled "Aids in the Prevention of Fevers," by Dr R W Seay, of Louisiana It may be of some corroborative interest to readers of THE JOURNAL to have my experience in the same line laid before them Having a city practice and being particularly interested in midwifery, it has been my fortune, good or bad as the case may be, to be called upon to treat quite a large number of abortions, both natural and the result of criminal practices, either by the patient or some of the professional scoundrels that abound in all cities It has for four or five years been my practice (as an absolute rule), in all these cases, to give for the first 72 to 96 hours after the expulsion of fœtus, etc, hourly doses of tinct veratrum viride I have never given large doses, having found 1 gtt an hour for 16 hours

out of the 24 to be amply sufficient I have never had a single case in which any serious inflammatory trouble has arisen I was first led to this practice by reading what Professor Fordyce Barker has said of the use of veratrum viride in puerperal fever I believe I owe my perfect exemption from inflammatory results to this practice directly and specifically After all severe forceps deliveries and turning operations I do the same thing, and my obstetric record is clear thus far An ounce of prevention is better than a pound of cure, and nowhere is this more true than in guarding against possible ills following so important processes, so intimately connected with the preservation of our homes and the perpetuation of the race Childbearing is the noblest function, and motherhood the most beautiful and endearing condition of any true woman, and as physicians it is our duty to rob it of every possible danger so far as we can do so

JOHN W JOHNSON, M D (Harvd)

Boston, October 10, 1887

INTUBATION

Dear Sir —In the last issue of THE JOURNAL appears an article on the above subject in which the writer claims an improvement, and would extract the tube by threading the extractor into it (The thread being attached to the tube) An ordinary person would not go to that trouble but would simply pull on the thread It is not an improvement to leave the thread attached, but if left then the extractor would be entirely unnecessary

F E WAXHAM

3449 Indiana Ave , Chicago

NECROLOGY

WILLIAM WORKMAN, M D

William Workman, M D , was of Scotch English descent, born at Colerain, Mass , in 1789, and died at Worcester in his 88th year Fitted for College at Hopkinton Academy, under Rev Daniel Huntingdon, he began the study of medicine in 1822, in the office of Dr Seth Washburn, and in the fall of that year attended lectures at Harvard University, continuing his studies with Drs Flint and Mather till Aug 25, 1825, when he received the degree of M D from Harvard College He immediately commenced the practice of medicine at Shrewsbury, where he remained for ten years In 1828 he married Sarah Paine Hemenway, whom he survived about four years

In 1835 he went to Worcester and continued the practice of medicine till 1861, when he retired He became a member of Massachusetts Medical Society in 1831, was elected Councillor in 1840, which position he held till 1864 Was chairman of the committee of arrangements of its annual meeting at Worcester in 1851, and delivered the annual address at Fitchburg in 1852 Was a member of the American Medical Association, and attended as delegate in 1853, 1855, 1860, 1865, 1866 and 1868 In 1831 he joined the Worcester District Medical Society, was Secretary from 1840 to 1844, Censor from 1844 to 1849, Vice-President from 1844 to 1846 and President from 1846 to 1849, and before his death gave the society his medical library He was an earnest and constant student with quick perception and sound judgment, was a progressive and conscientious practitioner He was a public spirited man, giving liberally of his time and means to matters of public importance From 1840 to 1850 he served with Judge A B Foster and Rev Drs Sweetser and Hill, on the board of overseers of schools, and after Worcester was made a city, served on its public school committee He was one of the founders of the Worcester Co Horticultural Society, was trustee for many years, then Vice-President, declining the election of President

In 1862 he was appointed by Gov Andrew, a trustee of the Worcester Lunatic Hospital, and reappointed by Gov Bullock in 1867 In 1862, at the time of the seven days' battle, was telegraphed to in behalf of the sanitary commission, for volunteers to act with that organization in caring for the sick and wounded, although then 64 years of age, he at once offered his services, and went to Fortress Monroe, as surgeon, in charge of a Government transport He was a member of the Union church from 1840 to his death, and always maintained an upright and conscientious Christian character

After his retirement from active practice, he devoted his time to books, and kept well posted in the live issues of the day, the infirmities of age did not dull his perceptions or injure the vigor of his intellectual faculties The sufferings of his last illness he bore with Christian fortitude, knowing the end was near, and calmly awaited the time when the summons to depart should come

Four children survive him Sarah E , wife of John O Smith, of Chicago, Elizabeth W , widow of the late Dr H McPherson, of New Jersey, Louisa J Workman and Dr William Hunter Workman, of Worcester

M G P

BOOK REVIEWS.

A MANUAL OF TREATMENT BY MASSAGE AND METHODICAL MUSCLE EXERCISE By JOSEPH SCHREIBER, M D , member of K K Gesellschaft der Aerzte of Vienna, formerly Docent in the University of Vienna, etc Translated, with the Author's permission, by WALTER MENDELSON, M D , of New York 8vo pp viii—285 Philadelphia Lea Brothers & Co 1887 Chicago A C McClurg & Co

At the close of the first chapter of his book Schreiber draws the following conclusions from personal experience 1 Every physician having the inclination and ability, no matter where he may practice, may acquire, self-taught, and successfully employ the methods of mechano therapy in the treatment of disease 2 The absence of apparatus such as is generally found in the regular establishments is no insurmountable obstacle to success It

may only render the application of the system a little more difficult, and perhaps retard the cure somewhat 3 Old and special cases, requiring special means, special experience, and special treatment, are best referred to the establishment of some specialist 4 Laymen, by instruction, and by observing others, may be trained to perform all the various manipulations, but allowing them the independent treatment of a case is not always without danger to the patient

The second chapter of the book is devoted to a consideration of the physiological, primary, and secondary effects of mechanical interferences, and of the evolution of heat in muscles as a result of mechanical concussion In the third chapter the mechanical interferences used are fully described, and the fourth chapter may be said to be in part a continuation of the third, inasmuch as "active movements," "calisthenics and the Swedish movement-cure," and "apparatus" are described, together with the physiological effects of gymnastics on the heart and circulation, on the skin and kidneys, on corpulence, on respiration, digestion, the central nervous system, and on the mind The fifth and last chapter, of 175 pages, is on the *diseases suited to the application of mechano therapy* In it are considered "only such maladies whose successful treatment by mechanical means is beyond all doubt, and is generally recognized by the whole medical profession" These maladies the author divides into six groups 1 Mechano-therapy of neuralgias and muscular rheumatism 2 Sprains 3 Chlorosis, chronic catarrhal gastritis, pulmonary phthisis, hysteria, hypochondria, diabetes mellitus 4 Cerebral congestion, hæmorrhoids, and pulmonary emphysema 5 Chronic dyspepsia and constipation 6 Chorea and writer's cramp This chapter, as well as other portions of the work, is profusely illustrated

We have no doubt that this work will prove a most valuable aid to the proper understanding of a subject to which too little attention is paid But one or two works on the subject, of which we have any knowledge, are at all equal to it, and certainly none are superior to it The translation has been made by an accomplished German scholar

MISCELLANEOUS.

HEALTH IN MICHIGAN, SEPTEMBER, 1887 —For the month of September, 1887, compared with the preceding month, the reports indicate that bronchitis, typho malarial fever, influenza and typhoid fever increased, and that cholera infantum, cholera morbus, dysentery, diarrhœa, whooping cough, and remittent fever decreased in prevalence Compared with the preceding month, the temperature in the month of September, 1887, was lower, the absolute humidity was less, the relative humidity was more, the day ozone was much less, the night ozone was about the same Compared with the average for the month of September, in the nine years, 1879–1887, intermittent fever, remittent fever, consumption of lungs, cholera infantum, diphtheria and whooping cough were less prevalent in September

For the month of September, 1887, compared with the average of corresponding months, for the nine years, 1879–1887, the temperature was lower, the absolute humidity was slightly less, the relative humidity was more, and the day and the night ozone were less Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of September, 1887, at fifty one places, scarlet fever at twenty one places, typhoid fever at forty six places, measles at five places, and small pox at one place

AMERICAN PUBLIC HEALTH ASSOCIATION, RAILWAY RATES —The Association will meet in Memphis, Tenn, on Tuesday, November 8, at 10 A M , and continue four days. The "Monon Line" (Louisville, New Albany and Chicago) and Chesapeake, Ohio and Southwestern Railroads have arranged to run a special Pullman sleeping car from Chicago to Memphis without change A number of delegates from Illinois, Michigan, Minnesota, Indiana and Iowa are expected to attend The railway fare for the round trip will be one and one third fare Dr Irving A Watson is Secretary of the Association and Dr G B Thornton Chairman of the Local Committee of Arrangements A number of exceedingly interesting topics will be discussed at the meeting The first meeting of the Executive Committee will be held Monday, November 7, at 4 30 P M The headquarters will be at the "Gayoso," on Shelby St

A PRIZE OF FIFTY DOLLARS IN GOLD is offered for the best essay on The Mutual Relations of Physician and Pharmacist The essay should endeavor to show how the ideal harmonious relations between physicians and pharmacists, both as individuals and as represented in their respective organizations, may be best realized, and all competitors must be governed by the following conditions

1 Any one interested in the subject may compete 2 The essay must not exceed 2,000 words in length and must reach us previous to January 1st, 1888 3 The MSS must be free from the author's name, address, or other marks of identification, and we recommend typewriter copy wherever practicable 4 The author's name and address must be enclosed with the manuscript on separate paper 5 All the essays submitted in competition for the prize are to be the property of the *Pharmaceutical Era*, and to be published or not at the discretion of the editor, but names of authors will be suppressed if requested 6 A committee consisting of five representative men chosen from the medical and pharmaceutical professions to whom the essays shall be submitted anonymously, shall award the prize, and the names of the committee will be announced with their decision

D O HAYNES & COMPANY,
Publishers of the *Pharmaceutical Era*,
Box 583, Detroit, Mich

BARON VON LANGENBECK, the great German surgeon, died on September 29, of cerebral apoplexy, in his seventy seventh year An appropriate notice will appear in the next issue of THE JOURNAL

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM OCTOBER 8, 1887, TO OCTOBER 14, 1887

Lieut Col Chas T Alexander, Surgeon, relieved from duty as examiner of recruits at St Louis, Mo , and ordered for duty at Ft Meade, Dak S O 235, A G O , October 8, 1887

CHANGES OF STATION

Capt Wm R Hall, Asst Surgeon, from David's Island to Ft Custer, Mont
Capt C E Price, Asst Surgeon, from Ft Custer to Ft Du Chesne, Mont Ter
First Lieut Wm N Suter, Asst Surgeon from Washington Bks to Ft McKinney, Wyo
Capt D Weisel, Asst Surgeon, from Ft McKinney to Ft Sill, Ind Ter
Major S M Horton, Surgeon, from Ft Riley to Ft Adams, R I
Major D Bache, Surgeon, from Ft Adams to Ft Riley, Kans
Major J P Kimball, Surgeon, from West Point to Ft Elliott, Tex
Capt R C Newton, Asst Surgeon, from Ft Elliott to David's Island, N Y
Major B L Heizmann, Surgeon, from Ft Ontario to West Point, N Y S O 232, A G O , October 5, 1887
Capt T A Cunningham, Asst Surgeon, died October 12, 1887, at Ft Lewis, Col

THE

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NINTH INTERNATIONAL MEDICAL CONGRESS

ADDRESS DELIVERED BEFORE THE SECTION FOR DERMATOLOGY AND SYPHILOGRAPHY

BY A R ROBINSON, M D, L R C P & S, EDIN
PRESIDENT OF THE SECTION

It devolves upon me as Chairman of the Section of Dermatology and Syphilography, to perform the very pleasant duty of offering, on behalf of my American colleagues, a most hearty welcome to our foreign co workers who honor us with their presence, and give us such fresh proofs of their deep interest in science by traveling so far to attend this meeting and to take an active and important part in the pro ceedings, although from our past history they must have very slight hope of any intellectual compensation from us And whilst we do not promise them as warm a reception from the authorities who regu late our weather conditions, as, according to rumor, the wind organs from certain quarters promised them weeks and months ago, yet they may rest assured that we are very glad indeed to see them present, and whilst we recognize them as leaders, as representative men in our special department, the men who have done and are still doing real scientific work, and in whom we place much hope for future advancement of our knowledge of subjects, still altogether too numerous in this branch of medicine, of which we know almost nothing, we would also gladly have welcomed a greater number of their col leagues, and regret the absence of several who, from illness or other causes, are unable to be present, although most anxious to have come

It is fortunate that the heat will not be so great as the false prophets promised, for, knowing the effects of high temperature upon the mental powers, and the amount of raiment one can wear under great heat conditions, and that these medical congress meetings are partly scientific and partly social in their character, it is evident that for a successful congress of this kind, the participants must be clothed and in their right minds If the social part is a comparative failure, I trust that the mental food offered will be rich in valuable material The American supply to past congress meetings has hitherto been an unknown quantity, for this meeting we already know the quantity, and will soon know the quality

You, as specialists, are too familiar with the dermatological literature of America, vast in yearly amount, meagre in contributions, not to wonder why, with so many writers upon the subject, with so many dermatologists animated with that peculiar American quality called "push," we have contributed so little to the recent substantial advancement in our knowledge of skin diseases But if we consider, as we now intend to do briefly, all the conditions under which we pursue our studies in this country, it will appear strange that good work is not even rarer than it now is

Taught in colleges, the majority of which require only a two years' course of study, the sessions of each year lasting only five or six months, what inducement do such colleges hold out to their students to study medicine as it should be studied, if they are ever to be other than the blindest followers in the pursuit of our profession of the advice received from a few lectures or compendiums? Such a college course was, perhaps, not objectionable in colonial days, or when physicians were not a drug upon the public, as they may be said to be now, when every village is overcrowded, and continual efforts to get patients are necessary to enable the professional man to build up a practice, and at the same time, financially, to make both ends meet It must be clear to the members of every teaching faculty in the land that a two or even a three years' course of study is quite inadequate to prepare a student—even if he be a student in the best sense of the term, bright and diligent—for the responsible duties of a medical practitioner, for the faculty is the examining body, and the superficial knowledge of candidates for graduation must be painfully evident to the professors

Lectures upon special subjects are given in the majority of the colleges, and in some of them dermatology is considered as a special subject, in which case, one clinical lecture a week is usually given As however, no examination upon the subject is required for graduation, the majority of students absent themselves from the lectures, but afterward receive their diploma, certifying to their knowledge of medicine in all its branches, although they may not have seen a single case of cutaneous disease, and could not diagnose an ordinary syphilide from an eczema, or even an elephantiasis from a scleroderma

Afterward in practice, however, they treat all patients with cutaneous diseases without hesitation, as

a rule, and with the utmost coolness and outward appearance of confidence in their knowledge of the "rash," for to them it is a rash and nothing more I am not blaming those general practitioners who follow this course, it is the legitimate result of the doctrine of the teaching body, for with only a two or three years' course it is not possible to devote time to subjects upon which they are not to be examined Neither do these remarks apply to those general practitioners of whom there is quite a number, who have devoted post-graduate time to the study of cutaneous diseases

But yearning after practical points—what drug to give for this or that disease, what is the best prescription for an eczema for instance—signs pathognomonic of imperfect mental training, and the lack of clinical experience, and of the information contained in good text books upon special subjects, bring about other evils which particularly concern us as dermatologists, and to which I will directly refer

On account of the few lectures given upon skin diseases, and the short course of study required, it is not possible to learn dermatology in this country, except under great disadvantages at least It is true that private instruction can be obtained at some dispensaries, and that regular clinics are held at some of the post-graduate schools, but for any extended knowledge of the subject a trip to Europe has hitherto been considered necessary Vienna has usually been the Mecca for those who wish to specially study this subject, as the magnificent material to be seen at the Hôpital St Louis has not drawn many students to Paris, whilst in London the patients are not used specially for teaching purposes, and consequently the advantages for studying the subject are not to be compared to those of Vienna

How long the student, now a physician, remains abroad depends usually upon his ideas of the proper course to pursue, and the amount of money at his command He should remain several years for the study of histology, pathology, morbid anatomy, internal medicine, bacteriology, and skin diseases, if he intends practicing afterwards as a specialist, but that is not the course usually pursued He devotes too much time to learning the diagnosis and treatment of skin diseases, a course very proper for a general practitioner, but not for one who ever hopes to advance our present knowledge of cutaneous diseases, for who can expect to add to the descriptions of clinical symptoms as given by such acute observers as Hebra, Wilson, Tilbury Fox, etc , observers who have devoted their lives to the subject, and seen their thousands and tens of thousands of cases I do not say that it is impossible to do so, but he has not a heavy heart or weak imagination who expects to make a reputation in that direction

To combine, as is frequently done, the subject of cutaneous with genito-urinary diseases, instead of with internal medicine, is a serious error, for the two classes of diseases are in no way related to each other, and a knowledge of the one does not aid us in the study of the other, whilst every one must admit the close etiological relationship of many cutaneous diseases with internal pathological conditions

Histology, normal and pathological, bacteriology, and general pathology hold the same relations to dermatology that they do to the other branches of medicine and surgery, that is, they are essential to the foundation of a broad view of the subject, and no one can fully discuss the etiology of the majority of diseases—that important branch of medical science which at the present time is studied more than any other—without some knowledge of them

Whether the student remains abroad for a few months only or for several years, he receives the foundation of his dermatological knowledge in foreign lands, be that slight and dangerous, or broad and capable of being built upon, according to the time and brain energy spent The majority of dermatologists at present practicing in America have obtained their schooling in dermatology in other countries, and as they continue afterward to be more or less influenced by the teaching received abroad, they may be called followers of this or that school, depending upon the country in which they studied

A school can exist only when there is a comparatively great dermatologist in a given country, one whose views are more or less unreservedly accepted, and his teachings followed by his countrymen, or when the leading dermatologists of a country hold similar and peculiar views As our knowledge of cutaneous diseases increases, and the number of dermatologists multiplies there is more and more difficulty in founding a school, so that at the present time we are scarcely justified in speaking of a German, French or English school, for in all these countries eminent dermatologists, of whom there are always several in each country, hold very widely different views concerning the etiology, nature and treatment of the inflammatory affections of the skin, and it is upon the divergence of views in reference to this class of diseases particularly, that schools have existed

As there is no particular centre for dermatological study in America, as there is no comparatively great dermatologist, and finally, as the majority of dermatologists have had their schooling abroad and hold widely different views on the inflammatory and other cutaneous diseases, there is no such a thing as an American school of dermatology, consequently, also, there cannot be a representative American dermatologist, for there are no special American views of dermatology to be represented

This is specially gratifying to your Chairman, for, that being true, it logically follows that it cannot be said of him for the present occasion that he is not a good representative of American dermatology As independent workers each of us represents but the character of our own labors, and if that is not creditable, the author is a corresponding dermatologist If the work done by American dermatologists, as a whole, is to be represented, then the position should not be a difficult one to fill, for the average of that work is not astonishingly high, as shown by the articles in journals, and the reports of our special societies

Returning from his European travels—"speaking a foreign language just as well as his mother tongue"—the would be specialist is beset by temptations to which he too frequently falls a victim With more medical journals in the land than are necessary for the publication of papers that repay one for their perusal, there is, on the one hand, a demand for an article on some subject—it matters not what it be—by the editor, and, on the other hand, a desire to publish a paper by the specialist anxious for reputation and notoriety The medical world at least must know that he is devoting special attention to a particular branch of medical science, and what plan so good as to write an article for a journal and, by means of reprints scattered broadcast, let the world know your specialty, name, and address A few repetitions of this procedure will, without fail, bring patients to the office, and reputation among the mass of general practitioners Why this latter is a result is not difficult to understand As already mentioned, the college graduates usually have no knowledge of the so called special branches, consequently any reprint—although it be only a compilation of previous articles by real workers—and very often they are even very poor compilations—appear to the busy practitioner to contain valuable information, and the author thereof as one having special knowledge of his subject

This mode of action is a very serious evil, and must and does bring discredit upon the specialists in that branch as a body It is to be hoped that the protest I now enter against this evil will not be in vain, and that in the future only such articles will be published as represent real contributions to the existing knowledge of the subject discussed We still have so little real knowledge of diseases of the skin that there is a wide field for future observation, and the energy wasted in the compilation of these papers should be devoted to original and more creditable work Let us show that American dermatologists have the spirit and ability to do their share of work for the advancement of our knowledge in their special branch of medical science I do not wish to be considered as maintaining in this address that no good work has ever been done in this country, for that would not be correct—but it has borne no proper proportion to the number of articles which have been published, for too often the heading of a paper as a "contribution" to our existing knowledge of this or that disease has scarcely been justified by the contents

As we learn most from a contemplation of our errors, I have endeavored to draw attention, as regards dermatology in America, to the faults of the colleges with reference to this branch, and the errors of action which we as specialists are liable to commit for our personal advancement, and have pointed out the way by which creditable reputation, if not pecuniary success, can always be attained

Finally, in view of past events, I desire to express the hope that another International Medical Congress will not be held in America until the profession in this country have shown, by their actions, a change of heart, that they are prepared to subject the desire for personal gain to the proper, nobler and more honorable feeling for the advancement of medical science and consequent relief of human suffering

ORIGINAL ARTICLES.

CLIMATE AND HEALTH RESORTS OF CALIFORNIA

Read in the Section on State Medicine, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY J W ROBERTSON, A B, M D,
ASSISTANT PHYSICIAN AND PATHOLOGIST NAPA (CAL.) INSANE ASYLUM

California has but recently attracted the attention of sanitarians This tardy recognition was partly due to its isolation, partly to the fact that the Argonauts looked not at the sky, but at the earth and cared nothing for scenery, climate or a pure atmosphere The Coast belt contained no gold, therefore they ignored it Southern California, where now bloom perennial orange groves and the rarest exotics, they pronounced a desert scarcely able to support a meagre growth of sage brush and cactus, a fit habitation for the coyote and the squalid Troglodyte Only recently has the fact been borne in mind that something is to be found more precious than gold, and from all over the world thousands of invalids flock here, they do not realize that California has a cosmopolitan climate adapted to all diseases that can possibly be benefited by change of air, that within its borders are to be found the altitude of the Alps, the scenery of Switzerland, the fruits of the tropics, numerous mineral springs which equal in value and are more healthfully situated than are those of the Eastern United States or Europe, the pure air of the Colorado Highlands and the winter climate of Florida, and that it is a nice question to always properly decide on that location best situated to relieve their particular disease They do not always choose wisely

Nor is this possible Every town, every mineral spring, every sea side resort, so loudly and so persistently bids for their countenance and so little reliable information outside of interested statements can be obtained, that they cannot intelligently select

I shall attempt to briefly outline the essential features of our climate, to explain in what particular respects we claim pre eminence for it, the rational of its therapeutic influence, and to mention those localities which are best adapted to certain classes of disease

While the climate of California is mainly due to its situation midway the temperate zone, the remarkable uniformity of temperature is due to local causes The great law that, in the Northern Hemisphere, all western coasts are warmer than the eastern, which is particularly well pronounced when the eastern is compared with the Western Coast of the United States The mean isotherm of 50° which passes through New York, latitude 41° bears north-

ward as it crosses the continent, touching the Pacific at Vancouvers Island, latitude 49° Nature also draws isotherms in her distribution of trees and plants While, on the Eastern Coast, 60° is the northern limit of Coniferæ they are found as high as 68° and 70° in regions adjoining the Pacific It is then evident that the climate of California is much more temperate than that of the Eastern States, which are situated in the same latitude; but this does not hold true of Southern California Here the conditions are reversed, San Diego, in the same latitude as Charleston, is 8° cooler San Francisco and Washington, in the same latitude and having the same mean annual temperature, have climates very dissimilar, owing to the great difference between the mean summer and winter temperatures of Washington, which amounts to 40°, and the small difference in San Francisco being not over 12° The mean annual temperature of Santa Barbara is 60°, San Francisco 55°, nor does it fall below this on the Northern Coast In Crescent City, 300 miles north, the temperature is as mild as is that of San Francisco, frost and snow being of rare occurrence

That this Coast Line, stretching through 8° of latitude, should have such remarkable uniformity of temperature, while phenomenal, is explained by the constant west wind which comes from the warm Japan current These winds bear with them the uniformity of temperature of large masses of water and render the West Coast climate warm in winter and cool in summer For this reason isothermal lines are, as they near the Coast, so deflected as to run North and South, and to mark out three climatic belts which I have named Coast, Valley and Mountain This division has been generally adopted and from a therapeutic stand-point answers admirably

The Coast climate extends several hundred miles North and South, and reaches from five to twenty miles inland

The Valley belt, beyond the Coast range, commencing with Shasta valley on the North, extends down through the Sacramento and San Joaquin Valleys into the arid plains of the Mojave and Colorado deserts, while the Mountain includes the Sierra Nevada beyond Rainless summers characterize all these regions

That portion of California which has obtained the greatest reputation, which has filled the eyes of strangers with visions of a land where the orange and the vine flourish, where the tenderest plants grow unprotected, where it is neither so warm as to be sultry or so cold as to necessitate fire, where nature has so blended her charms as to hush the murmurings of the most fastidious invalid, is along the Coast and the adjacent country directly influenced by it And this is of truth a wonderful region A Coast line extending through 8° of latitude where snow is phenomenal and frost rare, where the mean daily, monthly, and annual temperature varies within a few degrees only, where the bright sunshiny days are the rule and sultry ones unknown, where the fresh salt air so invigorates as to prove an exhilerating tonic, and where flagging energies and a toneless system are revivified and thrown into a state of the highest tension, commands recognition To every picture there is, and should be, some dark lines In our enthusiasm we often forget to mention the fogs which float in from the ocean and enwrap us with a chilly embrace, that the breeze which so intoxicates us and which, by long habit, we have learned to call bracing, searches the marrow-bones of the unacclimatized and sends cold chills through the enfeebled frame of the invalid This holds true of that region only which is north of Point Conception and is directly on the ocean

Our boasted climate is only exemplified to the full in those places so far away from the Coast that the radiant heat will remove all rawness from the sea-breeze, or in those Valleys adjacent to the Coast but protected by the foot hills

The Japan current which hugs the Northern shores so closely, giving us a cool and bracing climate, does not exert the same influence south of Point Conception This is partly due to its waters being heated by the more southern seas and a hotter latitude, partly to the fact that it is at this point separated from the main-land and pushed to the westward by a warmer current The wind blowing over this no longer chills, but still exerts a decided influence For this reason certain portions of Southern California possess a climate in its way unapproachable and not to be rivalled the whole world over

So loudly, so ably and with such justice have its praises been heralded that to add were useless Even here, it is well, in selecting, that some care should be exercised Climatically speaking, the therapeutic area of Southern California is small It is limited to those localities only which are directly influenced by the ocean breeze and extends but a few miles inland In the Valleys back from the Coast, the summer heat becomes unbearable, there is but slight vegetation and good water is not easily procured The winters, however, are said to be mild, dry and wonderfully invigorating Only a few inches of rain falls and out door life is practicable

It is this region that first attracted the attention of sanitarians and gave California its greatest climatic reputation Even now the majority of invalids look to Los Angeles as to a new Mecca, and with ever increasing wonder behold the mighty changes wrought by the hand of man, which for once have far outrivaled nature even in her most lavish mood This climate speaks so strongly for itself, it is so mild and delightful that the most carping cannot find fault and the invalid susceptible to the slightest chill, utters no complaint For this reason it is taken for granted that it of necessity agrees What is agreeable does not always agree The climate of San Francisco, directly influenced by the cold ocean breeze, is not agreeable and makes but a poor impression on the visitor Beyond all other spots along the Coast it is disagreeable, and all drawbacks to the Coast climate are here illustrated in extreme This is caused by its location The Sacramento and San Joaquin valleys here have their outlet During the summer both are intensely hot and the rarified air, rising rapidly, forms a vacuum which the ocean breeze rushes in to fill The

Golden Gate is indeed a gateway, presenting no obstruction, and the wind sweeps through it, across the bay and up the Sacramento and San Joaquin rivers with great velocity During the early morning, and ordinarily, until near noon, the bright sky, the mild and bracing atmosphere makes one so tingle and scintillate with life that every nerve of the body and all the faculties of the mind are in a state of tension, and no more delightful form of intoxication can be imagined When the interior valleys, warming up, begin to suck in the cool sea breeze the gentle motion of the air adds a new delight In the course of an hour, all is changed It is no longer a breeze—it is a hurricane bearing everything before it that is ordinarily moved by such a force Between the town and the ocean stretch several miles of sand hills, and, fed by these, the streets soon become a swaying cloud of dust, fine sand and rubbish On gala days when the sun shines on the interior valleys with unusual intensity, small gravel is added, that cuts like a whip and fills eyes, nostrils and mouth with a grimy coat Strange to say the inhabitants soon become accustomed to this, and after a few months residence, this one drawback counts for naught against its more powerful claims for their approbation Along the whole Coast the heat of the interior causes a like afternoon breeze, but except in a few localities where a break in the foot hills gives it free sweep, is not disagreeable

This climate is susceptible of subdivision, the one just described being directly on the Coast, the other, more moderate, but of the same type, a few miles inland and protected by the foot-hills from the full force of the breeze Here lie many valleys with a climate equaling that of Southern California. Those which have become best known because of their proximity to San Francisco are the Livermore, Santa Clara, Napa and Santa Rosa Valleys None of them are distant an hour's ride but because of their location, the afternoon breeze is shorn of all harshness These are fast being occupied as summer resorts The country is rolling, well watered and fertile, bearing grapes, fruits and flowers in great profusion In summer the thermometer may register 70° or 80° at mid day, but such heat is exceptional The mornings and afternoons are never sultry, and the nights are cool Nor is there any evening fog During the winter frost occurs but rarely, and snow and ice are unknown

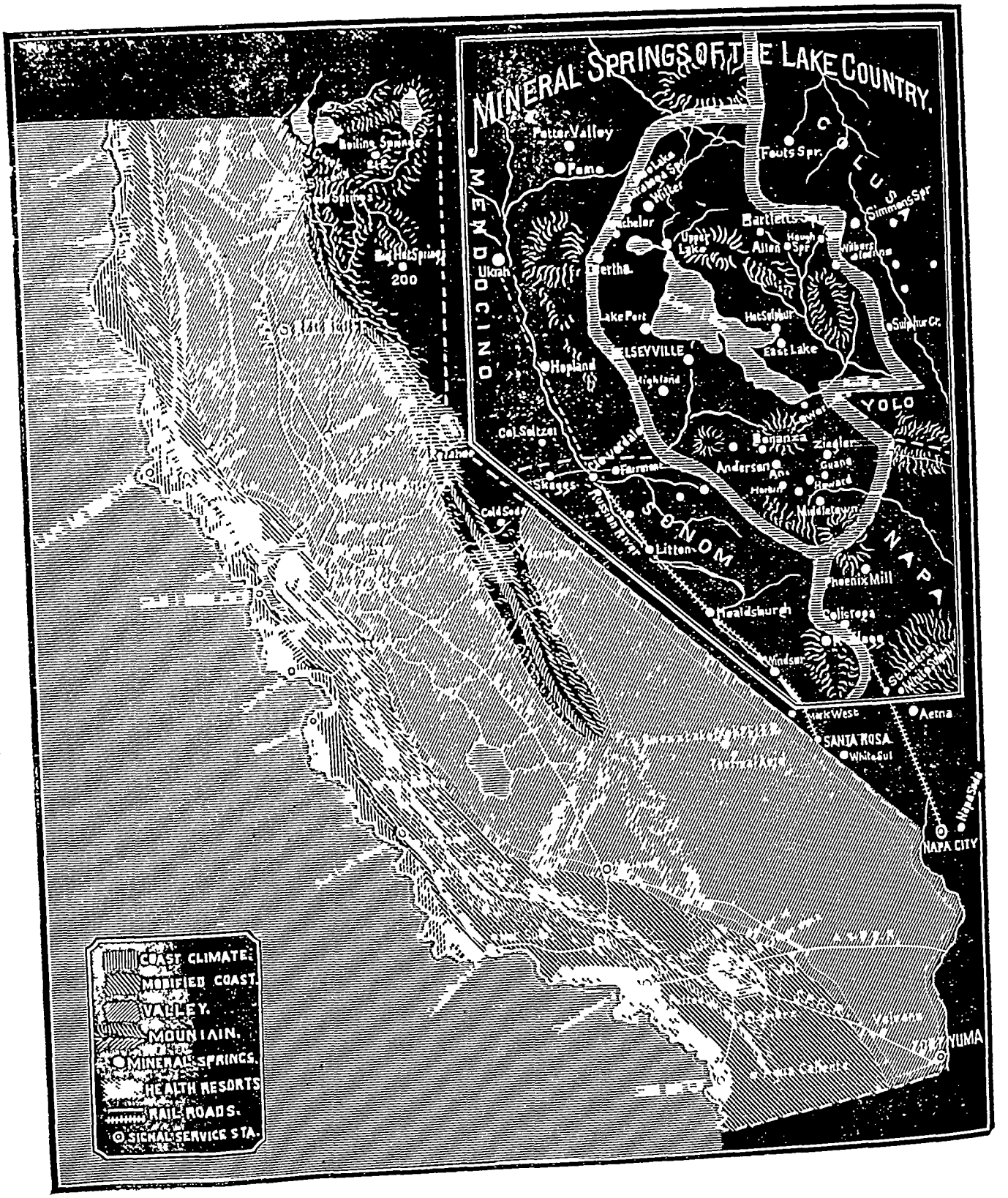
Still further inland, in the very heart of the foothills, there is a region which should attract sanitarians by reason of its promise of therapeutic usefulness It combines magnificent scenery, moderate elevation, and a bracing atmosphere with what promises to be most important mineral springs These occur in great numbers and in a country which, without them, would leave but little to be desired Fish and game abound and prove a sufficient attraction to force energy and life into the most lethargic and induce that amount of exercise necessary to vigorous health Volcanic products are here found in great abundance and mineral deposits are frequent Water, trickling through these, become impregnated with various salts, and, emerging as springs, undoubtedly possess some healing power Little scientific attention has been bestowed upon them, and, while a few have been authoritatively analyzed and honest efforts have been made to have them stand on their own merit, many have been given names and analyses, tending rather to prove their resemblance to some celebrated Eastern or European Spa, than to make plain the many and strong claims peculiar to themselves

While Sulphur, Vichy and Congress Springs may be rightly named, and their claims of resemblance to their more celebrated sponsors may be just, yet, because of their origin, it is no more probable that any two would resemble than that two kaleidoscopic pictures, although formed by the same glasses, should be identical The more disagreeable the water tastes, the more redolent it is of sulphur or the more stained with iron, so much the more eagerly is it sought after No matter what salts be contained in the water or what be their degree of concentration, the amount consumed is, as a rule, limited only by the capacity of the stomach or its ability to retain Thus abused their very best therapeutical effects cannot be obtained At a few of the more prominent resorts physicians are located who can give intelligent directions with regard to the waters and recommend or forbid their use, but therapeutical precautions are often disregarded

These springs are scattered over the whole State Provided they be easily accessible and the surrounding country, climate and scenery be such as to warrant the outlay a health resort is established, otherwise they are ignored Hundreds are found throughout the mountains of the Coast range in spots wild and inaccessible, but even these are by no means neglected Wild animals, either attracted by the singularity of the taste of the water or for proved qualities, flock to them, and their location is usually marked by numberless trails centering there

Various classifications of these springs have been attempted, but their ingredients so vary that no rigidly scientific system can be adopted Nor have the necessary analyses been made to even classify in accordance with the nomenclature ordinarily employed But crudely as they have been used and greatly as they have been abused, there is much and unanimous testimony as to their beneficial effects in certain chronic diseases Comparatively few springs are found either in the Northern or Southern parts of the State with more than a local reputation It is in Central California, in the foot hills already mentioned, that they abound Lake county, so named for the beautiful sheets of water within its boundaries, contains the majority of these, although many are found in the adjacent counties of Napa, Solano, and Mendocino In this region alone some thirty locations have been made, buildings erected and health resorts established At many of these there are several springs both hot and cold, the former being used tropically or in the form of bath, the latter internally

Clear Lake, surrounded by mountains, lies in the heart of this region It is easily reached from San


MINERAL SPRINGS OF THE LAKE COUNTRY.
MENDOCINO
LAKE
YOLO
SONOMA
NAPA
YUBA
COLUSA
Potter Valley
Pomo
Ukiah
Boiling Springs
Hot Springs
200
Upper Lake
Lake Port
ELSEYVILLE
Highland
Hopland
Col. Seltzer
Cloverdale
Skaggs
Cold Soda
Litton
Healdsburg
Windsor
Petaluma
Sebastopol
Forestville
Guerneville
Duncans
Ziegler
Anderson
Guano
Howard
Middletown
Phoenix Mill
Calistoga
Napa
Aetna
Santa Rosa
White Sul
Napa City
Yuma
Fouts Spr.
Simmons Spr
Bartlett Spr
Allen
Hawk Spr
Wilbers
Sulphur Cr.
Hot Sulphur
East Lake
Scotts Valley
Wilson
Scheller
Coast Climate.
Modified Coast.
Valley.
Mountain.
Mineral Springs.
Health Resorts
Rail Roads.
Signal Service Sta.

Francisco either by Calistoga or Cloverdale Daily stages here connect with the various health resorts, the time occupied in reaching the most remote not being over twelve hours from San Francisco

In the accompanying map I have figured those health resorts only which have an established reputation and where special preparations have been made to accommodate guests I find it impossible to accurately locate all the mineral springs There are very many in Southern California, especially in the counties of San Louis Obispo and San Diego which have only recently been improved Not having visited all these springs, and descriptions with reference to locality being vague, I can only approximate the situation of certain ones

The climate of the Valley belt I cannot unreservedly praise During the summer the thermometer ranges high, in certain localities registering 110° or over This heat is better borne than would be that of a like intensity in the East, because of the extreme dryness of the atmosphere This, like a sponge, absorbs moisture from the body with such rapidity as to cool the surface Probably this evaporation is so great as to dry the fluids in the body, and certainly act injuriously upon the mucous membranes of the nose and bronchial tubes Many cases of malaria, diphtheria and other endemic diseases here rankly flourish, partly due to artificial irrigation, but more especially found in those localities along the Sacramento and San Joaquin rivers which are annually overflowed During the winter months therapeutic benefit can be obtained even here by reason of the mildness of those localities far to the South or where the Coast range breaks and allows the warmer Coast climate to exert a moderating influence

Oroville, situated on the Western slope of the Sierras, is now regarded as the heart of the Northern citrus region, and the country adjacent is being fast settled by invalids who here combine a mild climate, with work not unpleasant

The winter mildness of the Sacramento valley is not altogether due to the warmer coast wind It lies at the foot and on the western slope of the Sierra Nevada mountains, which effectually protect it from the cold polar trade wind This is well illustrated by comparing the winter climates of the western and eastern slopes Truckee, on the eastern slope, is not uncommonly buried in ten to twenty feet of snow while Colfax and Auburn, just across the divide, are surrounded with green fields, and a little further down, fruit orchards and orange groves flourish

Lieut Maxfield, Signal Service Officer in charge of the station at San Francisco, has, at my request, compiled the table appended

The stations named are taken as types, being selected as most nearly representing the various climates The second column indicates the highest, while the third gives the lowest degree of heat registered by the thermometer during the whole month The other columns are sufficiently explained by their headings The stations located at San Francisco and Mendocino typify the climate of the coast belt Mendocino, projecting far into the ocean, is unduly

JANUARY, 1886

Stations	Mean Temp	Maximum	Minimum	Mean Daily Max	Mean Daily Min	Mean Daily Range	Greatest Daily Range	Least Daily Range
Cape Mendocino	48 0	61 1	33 7	52 7	43 5	9 2	23 1	1 4
San Francisco	50 9	67 5	41 0	56 5	45 8	10 7	19 6	5 8
Red Bluff	46 2	64 5	30 0	54 3	39 3	15 0	27 5	5 0
Sacramento	45 7	62 2	27 5	52 0	40 4	11 6	21 5	3 5
Los Angeles	54 7	75 3	32 0	63 6	47 0	16 6	28 2	5 7
San Diego	55 9	73 5	34 8	62 3	49 3	13 0	24 2	4 8
Keeler	42 8	67 0	25 6	51 4	34 5	16 8	24 3	8 8
Yuma (Fort)	55 0	70 6	30 4	64 9	45 8	19 1	30 5	7 0

FEBRUARY, 1886.

Cape Mendocino	50 3	60 9	34 5	54 5	46 1	8 4	14 5	3 8
San Francisco	55 8	71 0	41 0	63 8	49 9	13 9	20 5	5 2
Red Bluff	54 5	77 0	37 0	64 9	44 4	20 5	33 0	9 5
Sacramento	53 5	72 7	38 0	62 4	47 1	14 3	23 0	7 0
Los Angeles	59 5	81 0	41 1	71 6	48 5	23 1	32 7	8 9
San Diego	58 5	80 3	44 2	68 0	50 2	18 0	29 0	4 8
Keeler	50 8	73 0	31 2	62 6	40 7	21 9	28 2	13 7
Yuma	62 7	83 4	43 0	76 2	50 2	26 0	33 3	18 4

MARCH 1886

Cape Mendocino	46 1	55 7	35 8	51 1	41 5	9 6	15 4	6 0
San Francisco	52 6	73 1	41 0	60 7	46 6	14 1	24 1	6 5
Red Bluff	52 8	74 6	35 0	62 0	43 8	18 2	29 4	10 0
Sacramento	52 1	72 0	37 7	60 8	44 2	16 6	26 3	8 3
Los Angeles	54 3	76 0	37 2	65 6	45 3	20 3	28 8	11 9
San Diego	55 0	68 2	40 7	62 2	48 0	14 1	20 6	7 1
Keeler	47 5	70 0	26 8	58 3	38 0	20 3	27 7	11 5
Yuma.	60 5	88 0	38 1	74 1	47 2	26 9	36 0	11 7

APRIL 1886

Cape Mendocino	47 5	63 2	38 3	52 9	42 9	10 0	17 2	4 8
San Francisco	54 9	78 7	44 2	61 7	49 2	12 4	25 2	5 2
Red Bluff	57 7	85 0	36 6	67 5	48 0	19 6	32 6	8 3
Sacramento	55 5	79 7	39 0	65 4	48 1	17 4	26 2	5 3
Los Angeles	57 2	80 0	42 3	69 0	48 7	20 3	35 5	10 0
San Diego	57 2	70 6	44 7	63 1	51 8	11 3	22 7	5 6
Keeler	55 6	80 3	35 2	67 3	45 5	21 9	27 3	10 5
Yuma	67 4	92 6	44 8	82 1	53 8	28 2	38 0	13 4

MAY 1886

Cape Mendocino	* 51 3	† 63 7	† 40 4	† 57 5	† 46 4	† 11 1	† 16 4	† 5 7
San Francisco	57 8	85 8	47 8	66 4	51 8	14 6	31 6	7 3
Red Bluff	66 9	94 7	45 6	78 8	54 7	24 1	33 6	8 8
Sacramento	62 0	94 0	44 5	75 4	52 2	23 3	35 5	8 5
Los Angeles	62 4	89 0	44 2	78 5	51 1	27 4	38 7	12 5
San Diego	60 4	72 3	50 0	67 4	54 5	12 9	17 0	6 4
Keeler	68 4	91 4	45 6	80 7	56 4	24 3	30 9	14 3
Yuma	80 1	108 4	54 5	97 0	64 8	32 2	41 4	15 9

* Observations for 28 days
† Observations for 29 days

JUNE, 1886

Cape Mendocino	54 0	65 9	47 0	59 6	49 9	9 7	14 2	6 5
San Francisco	57 9	82 8	48 3	67 8	51 1	16 7	27 6	8 4
Red Bluff	79 1	102 7	55 8	92 1	64 6	27 5	34 5	20 8
Sacramento	69 0	97 7	51 5	85 3	57 0	28 3	35 5	15 0
Los Angeles	66 1	91 6	48 2	80 9	56 8	24 1	39 4	9 6
San Diego	63 1	74 8	54 3	69 5	58 6	10 9	20 2	6 2
Keeler	75 8	98 4	48 4	89 5	63 5	26 0	31 1	17 5
Yuma	84 0	109 5	64 1	102 1	69 5	32 6	39 8	2 5

JULY 1886

Cape Mendocino	55 4	70 7	48 0	61 9	51 4	10 5	20 7	6 3
San Francisco	59 1	77 8	49 7	67 7	52 9	14 8	22 8	8 4
Red Bluff	182 9	109 0	55 2	97 0	66 7	30 2	38 7	22 9
Sacramento	72 0	105 0	52 2	89 7	58 9	30 7	37 8	24 5
Los Angeles	69 7	98 1	50 4	86 9	57 9	29 1	40 4	19 8
San Diego	67 1	81 2	57 0	73 4	62 4	11 0	19 7	5 2
Keeler	79 9	100 4	58 3	93 4	68 1	25 2	32 1	13 3
Yuma	90 8	112 4	69 3	106 7	77 2	29 5	38 1	14 4

‡ Observations for 30 days

AUGUST, 1886.

Cape Mendocino	56 6	71 0	46 5	63 8	51 9	11 9	22 5	7 9
San Francisco	58 5	84 8	48 4	68 7	52 6	16 2	26 5	8 5
Red Bluff	81 5	103 8	57 2	95 9	65 4	30 5	37 1	22 5
Sacramento	71 6	102 0	53 2	90 4	58 4	32 0	42 8	23 0
Los Angeles	71 8	98 1	53 7	89 1	60 1	29 0	36 7	13 8
San Diego	70 5	82 5	61 4	77 5	65 5	12 0	15 7	8 2
Keeler	81 5	103 4	65 1	94 0	71 3	22 7	32 5	15 2
Yuma	89 6	111 6	74 7	102 2	79 5	22 7	33 6	11 9

SEPTEMBER, 1886

STATIONS	Mean Temp	Maximum	Minimum	Mean Daily Max	Mean Daily Min	Mean Daily Range	Greatest Daily Range	Least Daily Range
Cape Mendocino	57 2	85 4	47 1	64 0	52 8	11 2	25 9	6 3
San Francisco	60 5	93 9	50 1	71 0	53 8	17 2	35 0	7 9
Red Bluff	75 6	106 4	52 6	89 9	61 1	28 8	37 4	17 4
Sacramento	67 9	96 0	49 0	85 9	54 9	31 0	40 0	20 0
Los Angeles	65 6	91 3	48 3	79 9	55 1	24 8	40 1	13 8
San Diego	66 6	77 7	60 0	72 3	62 7	9 6	17 1	6 0
Keeler	74 1	94 0	53 4	87 3	62 0	25 3	29 9	17 4
Yuma	84 2	104 5	62 0	98 7	70 7	28 1	35 6	20 8

OCTOBER, 1886

Cape Mendocino	53 0	64 8	44 4	58 1	49 8	8 3	13 2	5 5
San Francisco	57 1	78 9	46 0	66 1	51 1	15 0	28 9	6 3
Red Bluff	60 7	92 6	38 5	72 1	49 1	23 0	37 5	13 2
Sacramento,	57 1	85 5	38 5	70 9	46 7	24 2	36 0	4 8
Los Angeles	59 3	82 2	41 1	71 9	48 3	23 6	39 4	8 2
San Diego	59 7	75 0	46 6	66 6	53 3	13 3	26 5	6 5
Keeler	58 2	81 4	33 6	68 6	46 8	21 8	27 6	15 3
Yuma	67 4	92 0	46 7	81 3	55 2	26 1	34 9	14 2

NOVEMBER, 1886

Cape Mendocino	51 3	68 5	40 2	56 7	47 4	9 3	20 7	4 3
San Francisco	55 1	75 0	45 0	63 7	49 0	14 7	23 1	5 8
Red Bluff§								
Sacramento	50 4	71 2	32 2	63 0	38 6	24 4	34 2	6 2
Los Angeles	56 6	84 9	34 1	70 1	43 0	27 1	38 9	13 5
San Diego	56 0	77 0	50 0	65 8	48 0	17 8	26 4	6 6
Keeler	45 1	68 1	24 3	56 3	35 7	20 6	32 7	13 8
Yuma	57 8	80 8	32 9	69 7	46 6	23 1	36 7	12 9

DECEMBER, 1886

Cape Mendocino	50 8	63 8	42 3	55 4	47 8	7 6	12 4	4 1
San Francisco	53 1	66 0	43 3	58 9	48 4	10 5	18 4	4 0
Red Bluff§								
Sacramento	49 2	65 2	32 0	57 6	42 2	15 5	32 2	5 5
Los Angeles	55 7	84 8	37 3	67 3	45 5	21 8	33 6	9 9
San Diego	56 0	75 5	40 5	63 4	49 2	14 2	24 5	7 6
Keeler	44 7	62 4	30 2	54 7	36 1	18 6	26 5	12 5
Yuma	59 3	79 3	34 3	72 5	47 3	25 1	32 6	18 1

§ Form not received for this month

Red Bluff, Nov '85	52 7	71 0	38 5	58 5	46 7	11 8	23 5	4 0
" " Dec '85	49 3	68 0	33 0	55 3	43 6	11 7	21 0	5 5

exposed to the cold fogs and, for this reason, averages somewhat cooler than does San Francisco Both north and south of Cape Mendocino the climate closely approximates that of San Francisco Red Bluff and Sacramento fairly represent the climate of the valley belt Red Bluff, situated far north, is not so cooled by the sea breeze as is Sacramento

A comparison of the temperatures of Los Angeles and San Diego is apparently in favor of the latter city, which is a trifle cooler in summer and warmer in winter San Diego is directly on the ocean and is more exposed to winds than Los Angeles, for which reason many prefer the inland city

Unfortunately, there is no official report of the temperature of Shasta and Scott valleys, which occupy the extreme north of the valley belt, or of the eastern slope of the Sierras These are the only portions of California whose climate resembles that of the Eastern States There are four well-marked seasons The thermometer rises to 100° during the hottest days of summer and falls to zero or below during the winter This is due to the fact that Shasta and Scott valleys are separated from the coast by the Siskiyou Mountains, a range whose lowest pass is 5,000 feet above the level of the sea This effectually protects them from the modifying influence of the coast wind

Therapeutics —The difference between the subdivisions of the coast climate, viz that found directly along the coast and that of Southern California and inland valleys, is the difference between a plunge bath in the ocean and a tepid sitz bath which is so near the temperature of the body as to produce a feeling of languor only, in other words, should the patient be so feeble that the cold wind and salt air chill, and should the after effect be such as to leave him depressed and unrevived, a residence on the sea coast is not desirable, on the other hand, should the patient be more robust and of a naturally vigorous constitution, the cold air, at first chilly and raw, soon produces a state of well being Vigor and tone are infused through the body, difficult for one who has never experienced it to understand

But there are certain diseases, no matter what the constitution of the patient be, which are deleteriously affected by the coast climate Those suffering from rheumatism should especially avoid the coast and seek a residence either in the mountains or at certain mineral springs Shovel Creek Springs, situated on the Klamath river in the northern part of Shasta valley, has obtained a reputation for its efficacy in the cure of this disease Mud impregnated with hot mineral waters is used topically, and often succeeds in relieving those obstinate forms of chronic rheumatism when ordinary remedies fail Hot baths are also to be obtained, but are not to be recommended unless competent medical advice has been sought and the circulatory system found perfect Other springs noted for their efficacy in this disease are found in the lake country Much benefit has followed the internal use of the waters of the Bartlett and Witter Springs Fulton Wells and Paso Robles have also obtained a wide reputation Chronic bronchial and laryngeal affections are unfavorably affected by the raw sea air For these the foot hills, where the temperature is even and the climate mild, is a most suitable location

The Highland Springs of Lake County, both by reason of their climatic surroundings and the specific influence claimed for its waters, has been highly recommended

Those of a bilious temperament should avoid the coast For some reason, to me unknown, it acts injuriously upon such cases Avoiding the diseases just mentioned those otherwise affected may seek the coast with a certainty of benefit, provided that their constitutions be sufficiently robust to react in the bracing atmosphere Malaria never originates on the coast, and when contracted elsewhere and brought here, if mild, is at once cured, when more deeply rooted it assumes a remittent type and will often recover without aid of medicine Those cases of malarial poisoning accompanied by serious visceral lesions, which are of such frequent occurrence in the Southern and Southwestern States, and which medicine cannot relieve, should be sent to this climate Those kidney diseases which water impregnated with lime is supposed to aggravate are relieved by the use of the waters here, which, as a rule, are deficient in this

Certain waters strongly impregnated with alkaline carbonates, such as those found at Byron, Tolenas and Skaggs Hot Springs, are also very efficient in relieving these cases

Consumption is supposed to be favorably influenced by the modified coast climate It is true that the great majority of those coming to Southern California are of this class, but whether they derive any benefit outside of the hopes engendered and the exercise they undergo in their flight from death, I cannot say Provided that the etiology of this disease be settled, that the bacillus which is beyond question found in the tuberculous deposits be not an effect, but the cause, and that its multiplication results in lung destruction, then I cannot understand how any climate can materially benefit A germicide and not a climate is essential for a cure On the other hand, if it be an inherited disease, depending on a depraved constitution which at the least exposure is liable to break down and manifest itself by the formation of tubercles, then what improves and renders the body vigorous must also beneficially affect the lungs

Consumptives should be warned not to drink the water of or to bathe in the hot mud of the various mineral springs When the disease is advanced they should be kept at home, no matter what part of the world it be in

Many come to California in the last stages and only reach it to die among strangers When the advice of the physician is overruled and they must choose some climate, that region south of Santa Barbara should be selected, both because of its easy accessibility and by reason of its mildness and the unchangeable climate there found In the early period much can be hoped for from this climate Numerous health resorts have been established both directly on the coast and in the interior valleys For those incipient consumptives who are fond of sport and for whom an outdoor life is desirable, certain portions of the mountain belt are to be recommended Above 3,000 feet the oppressive heat disappears, though still warm, outdoor exercise can be taken without inconvenience Camp life can be indulged freely, the dry summers assuring freedom from inclement weather It combines together with magnificent scenery, a desirable elevation, dryness, a moderate temperature, and a pure atmosphere impregnated with the balsamic emanations of the pine and fir trees There is an immunity from all endemic diseases except mountain fever—described by Dr Kober in the last Report of the Secretary of the State Board of Health

This exposure to a dry and high atmosphere presents a hopeful prospect of recovery Nature here acts on the lungs in a manner similar to that of the pneumatic cabinet recently so much in vogue It causes the lungs to expand more freely and in this way assists in their development What specific curative properties altitude possesses over consumption I do not know I cannot believe that it is the mere fact of causing lung expansion Certainly less oxygen is obtained in an equal number of respirations As recent observations tend to show that germs do not readily develop in higher altitudes, this would be a plausible explanation Consumptives should be absolutely forbidden to use the mineral springs, as under no circumstances can benefit be derived Certain cases uncomplicated by bronchial lesion seem to do well on the coast This is probably due to lack of germs, for along the whole coast, except in the region of large cities, endemic and epidemic diseases are unknown The wind undoubtedly acts as a germicide

In a paper necessarily so brief, I cannot more fully enter into a discussion of the therapeutical effect of our climate I trust that in making this summary of the topography of California, its climate, its peculiar environment and its many natural advantages, I have made the subject so well understood that it will be possible for every thinking physician to draw the legitimate conclusions, and to so intelligently advise those invalids desiring a residence here, that they may select a proper location They should remember that much depends not only upon the disease itself, but also upon the condition of the patient and the peculiarities of his constitution

DISCUSSION

DR J M ALLEN, of Liberty, Mo The article just read is certainly very suggestive of prospective changes in our ideas of pathology The tubercle has been a puzzle to our profession for years It is but recently that the mass of the profession has accepted the idea that it was of inflammatory origin While it is not necessary for us to change from this position it seems more than probable that we will have to change our ideas as to the cause of this variety of inflammation, which we have ascribed heretofore to atmospheric conditions of heat, cold, moisture, etc , and add a new factor, the bacillus tuberculosis, which recent investigations have shown to be always present This throws new light on climatology Practical observation has long since taught us that locality, or the environment surrounding the human family, has much to do in determining the character of diseases they suffer from The absence of a disease from a certain locality carries with it the fact of the absence of the specific cause of this disease If this specific cause be a germ, it has a life to be supported by its environment, and can exist only when and where these essentials for its life and propagation exist Now the facts as stated by the author of this paper, that phthisis pulmonalis rarely occurs in certain districts in California, and when cases in their earlier stages are brought there they rapidly improve This carries with it the idea that the essential for the support and propagation of the bacillus tuberculosis are absent This idea is strengthened, I think, by the fact that our system of railroads and other means of communication are so perfect and rapid that the bacillus has undoubtedly been planted there, yet it has not lived and propagated for the want of the element necessary for the support of its life Further, it is a well established fact that there are localities in the West where fresh beef may be hung out in the open air for weeks (without salt) and no putrefaction occur This can only be explained by assuming that the bacteria of putrefaction are absent, or rather that the element necessary to support the life of this form of germ is absent Why may not the same be true in regard to the bacillus tuberculosis? Again, Dr Robertson in-

forms us that in some of the districts of California malaria has no local existence, and only exists when imported, after which it manifests itself in a very mixed form and finally ceased to exist, or becomes attenuated We all know that this is one of the most vigorous germs we have to deal with, and always exists wherever the elements for the support of its life exist In regard to phthisis pulmonalis it is a well established fact that irritation followed by inflammation does not necessarily produce tubercle But when the new factor of life is added, the bacillus tuberculosis, tubercle is always the result But not desiring to go too far in this direction, we will say that wherever there exists tubercle, the bacillus is present, then what part does it play in the production of this pathological process? It cannot be that of an irritant only, for we all know that irritation and inflammation alone cannot produce tubercle In view of the fact that this bacillus is a living germ that derives its support of life from its environment May it not be that it consumes for the support of its life certain cell-elements, the absence of which causes the cell to undergo the retrograde metamorphosis of tubercular formation? We hope that the author of the paper will bring us annually a report on this interesting and important subject, and that he will avail himself of any opportunity to press his investigations in the fresh and fruitful field of scientific research

DR A N BELL, of New York, stated that the promotion of phthisis may be found in dirty soil-moisture The smallest percentage of phthisis is among people subject to ocean atmosphere (by which is not meant a *coast* atmosphere) The dry atmosphere, whether in a high latitude or in a hot school room will draw moisture wherever it can get it and will draw it from the nares and bronchial tubes Englishmen go to Madeira, and others go to Nassau and Bermuda Some think they cannot live unless they go to these places every winter, and is so not because they are in a moist atmosphere but a *clear* one, and one that is unirritating It should be borne in mind that only about one-fourth of the cases of phthisis are hereditary, and that on most of our seacoast we have dirty soil-moisture—the soil impregnated with both animal and vegetable decomposition

DR J F HIBBERD, of Richmond, Indiana, said that while he had great pleasure in the paper, it was open to the criticism of not being sufficiently definite to enable a physician to select the particular location in California where he could send a patient with any given form or stage of consumption We needed more definite information It was possible that certain surroundings in any climate might determine whether a patient with incipient consumption should succumb to the disease or recuperate and be of sound health Dr Lynch, in his address before the Association this morning, told of an experiment recently reported in Baltimore, wherein fifteen rabbits of equal development were utilized Five of them were injected with bacilli, put into a dark, damp cellar, and all died of tuberculosis Five were likewise injected with bacilli, sent into the country, where they had good air and food and opportunity for appropriate exercise, and they all recovered Five were not injected with bacilli but were placed in a dark, damp cellar, and all died, but not with tuberculosis And to the same point was the testimony of Brown-Séquard with whom he (Dr Hibberd) had talked some years previously in Paris He stated that the rabbits and other animals used in vivisections had been placed in unventilated quarters, and nearly all died of tuberculosis, but when they adopted the plan of sending these mutilated animals to the country with plenty of good food, fresh air and exercise, they nearly all got well, though now and then one died of some traumatic accident

DR W L SCHENK, of Osage City, Kansas The careful observer notes the effects of various climates and localities upon health The scientific sanitarian should account for such results The author of the paper has told us that certain places in California are free from malarial diseases, while in other localities it exists abundantly My friend says "bacteria malaria," Another might say, simply "malaria"—an entity or nonenity that the most careful and scientific researches in chemistry or microscopy have failed to demonstrate In all localities where periodic diseases prevail with any considerable intensity, three factors exist, alternating heat and cold associated with moisture, the moist heat of the day enervating, the damp cold of night emptying the superficial capillaries until internal engagement involves periodic disease Moist heat enervates more than dry heat Moist cold chills more than dry cold Where there is alternating heat and cold with moisture there will be found malaria

DR HENRY B BAKER, of Lansing, Michigan, asked attention to the fact that three speakers, including the author of the paper, had coincided in mentioning localities and climates as favorable to freedom from malaria and to recovery from phthisis, the prominent character of which was small daily range of temperature, that is, slight difference between the day and night temperature This is true of California and the ocean climates On the other hand, in the inland States the malarial region is the region where there is great difference between the day and the night temperature And going from the North toward the South the malaria increases somewhat in proportion as the difference between the day and the night temperature increases

DR WOODS HUTCHINSON, of Des Moines, Iowa There seems to me no inconsistency between either Dr Bell's or Dr Hibberd's statements and the germ theory of the origin of phthisis The "dirty moist air" of the former is the chosen home and necessary environment of bacteria, while the "ocean air" is above all others essentially free from germs, inasmuch as they are too solid bodies to be carried over long ocean distances California atmosphere ought to be germless on account of the ocean on the West, and the desert and frozen mountain chain on the East, and this undoubtedly is one of the factors in its value for the treatment of phthisis The leading factor, however, in the efficacy of climate upon disease germs lies in the fact that it encourages outdoor exercise and improves the physique in every way

This is the one property in which the Engadine, Cuba, Los Angeles, and Madeira have in common The most effective germicide is a vigorous healthy organism Life is the deadliest enemy of disease and decay, and what we are endeavoring to accomplish with our cod liver oil and hypophosphites, is done much more effectually by mild, invigorating climates The vitality of the body is raised to where it can destroy any disease germ, whether tubercular or malarial

GERANIUM MACULATUM

Read in the Section on Medicine, Materia Medica and Therapeutics, at the Thirty Eighth Annual Meeting of the American Medical Association, June 7, 1887

BY JOHN V SHOEMAKER, M D ,
OF PHILADELPHIA

If the craze for therapeutical novelties could be diverted from the jungles of India and the laboratories of the manufacturing chemist, to the fields and forests of the United States, suffering humanity would be the gainer Many of the most highly lauded, marvelous synthetical products and wonderful drugs precipitated upon the profession during the past few years are not only useless but positively injurious, while scarcely 2 per cent of the remainder possess any practical value

Geranium Maculatum, to which I desire to redirect your attention to day, is not a new remedy imported over thousands of miles of land and sea at prodigious expense, neither is it the patented compound of forty stills, recommended as a sure cure for all diseases by forty medical theorists who do not know the difference between the pulse in health and disease, but it is one of the most valuable and yet the least known of American indigenous remedies More than 60 years ago Dr Barton, in briefly reviewing its medicinal properties, declared it to be certainly entitled to the attention of every American physician Yet notwithstanding the commendation of Dr Barton, and other distinguished observers, Geranium Maculatum has been almost entirely discarded Indeed, so seldom is it prescribed that druggists in many places do not keep it in stock When I began to investigate its merits five years ago, not one of the eight druggists to whom I sent for it had any on hand, and I was finally compelled to send to a wholesale house for the quantity needed

Geranium Maculatum contains tannic and gallic acids, gum, starch, sugar, coloring matter and various resin and oleo resins, which have not yet been studied Its value depends in large part upon the tannic and gallic acid present, but its resins, oleo resins and other constituents enhance its usefulness, and render it more potent in many affections than any preparation of tannic or gallic acid alone or combined The portion of the plant used in medicine is the rhizome, or the root stripped of its bark The dose of the powdered root ranges from 10 to 40 grains As it is soluble in water or alcohol it may also be administered in the form of the tincture or the fluid extract The dose of the former preparation varies from ½ to 2 drachms, and that of the latter from 10m to 3iss The fluid extract is the most eligible and effective preparation, as it contains all the virtues of its plant When combined with an equal quantity of simple syrup and diluted with a small amount of water it is not unpalatable, and will not be rejected by the most fastidious patient

Therapeutic Action—There are few remedies which possess a wider range of usefulness than geranium maculatum, and which are so devoid of harmful properties In all forms of hæmorrhage, whether internal or external, it is without a superior Hæmoptysis can usually be promptly arrested by drachm doses of the fluid extract given hourly until the attack subsides Relapses may be prevented by continuing the same dose at longer intervals for three or four days Hæmatemesis may be effectually controlled in the same manner after ergot, matico, sulphuric acid, iron, ice and other styptics have failed In hæmorrhage from the kidneys and the intestinal canal better results can be obtained from the administration of smaller doses, gtt xx four times daily, for an extended period Epistaxis may be speedily checked by plugging the nostrils with cotton dipped in a solution composed of 1 part of the fluid extract of geranium and 3 parts of water, or by syringing the nasal passages with the same solution Hæmorrhage resulting from the extraction of a tooth is occasionally obstinate in character, persisting for days, defying the cautery and other methods, enfeebling the patient and alarming the family, but it can invariably be promptly arrested by filling the socket with a piece of cotton saturated with the undiluted extract of geranium maculatum, and applying firm pressure for a few minutes Hæmorrhagia can be most effectually abated by the internal administration of geranium combined with vaginal injections of the same remedy In fewer cases it may be necessary to tampon the vagina with cotton soaked in a diluted solution of geranium or to inject the uterine canal with the same solution This latter procedure is the most effective method of arresting uterine hæmorrhage, but it must be resorted to with caution

Geranium is also of value in purpura, scurvy, hæmitidrosis, and the hæmorrhagic diathesis It is a most serviceable remedy in colliquative and chronic diarrhœa, infantile diarrhœa, and the diarrhœa of typhoid fever It may be given with marked benefit in the later stages of cholera infantum, cholera morbus, and chronic dysentery In the latter class of affections, rectal injections of the remedy appear to be most efficacious, as by this means the medicament is conveyed directly to the diseased portion of the mucous membrane This is also an effective method of eradicating ascarides

Geranium is of especial value in phthisis, restraining the diarrhœa preventing hæmorrhage, moderating the fever and night sweats, lessening the cough and promoting the appetite

In chronic bronchitis and bronchorrhœa marked improvement may be obtained from the administration of

℞	Tinct nucis vomicæ	ʒj
	Tinct sanguinaria	ʒj

Ext geranii fl	℥jss
Syr simp	℥jss

M

Sig Teaspoonful in water, every 4 hours

Chronic gastric catarrh, and the various stomach disorders due to indulgence in alcoholic liquors, can be most speedily remedied by a restricted diet, reformation of habits, and the administration of ℥ss of geranium 4 times a day

Cases of anæmia and chlorosis in which iron, arsenic, strychnine, phosphoric acid and quinine have not been of any benefit, frequently improve at once upon drachm doses of geranium before meals Amenorrhœa and other disorders of menstruation dependent upon poverty of the blood, often disappear spontaneously during a course of geranium

Aphonia due to nervousness, mild cases of hysteria, and alcohol trembling, are all benefited by full doses of geranium frequently repeated I believe that it will also be found of service in the treatment of chorea

Diluted with 3 parts of water it forms an elegant and effective gargle in relaxation of the uvula and fauces, chronic pharyngeal catarrh Applied in the same strength with a post-nasal syringe or douche it is without a superior in naso-pharyngeal catarrh When combined with an equal quantity of water it forms an excellent mouth wash in aphthæ, scurvy, mercurial stomatitis, and idiopathic softening of the gums In leucorrhœa, prostatorrhœa and chronic gonorrhœa, it may be given internally, and also used as an injection in the proportion of 1 part of the fluid extract to 10 parts of water The injections should not be used more than once every second or third day Purulent cervicitis, fissures of the cervix, and catarrh of the body of the uterus and relaxation of the vaginal walls can be cured by the application of the fluid extract of geranium, either through the medium of an injection or by the ordinary cotton tampon and application

The pain and irritation attendant upon fissure of the anus can be removed at once by touching the fissure with the undiluted extract, and a permanent cure effected by continuing the applications 2 or 3 times daily for a few days Prolapsus ani will usually yield rapidly and not recur if the pure fluid extract be brushed daily over the protruding mucous membrane, and a 25 per cent solution be injected into the rectum every second day Ulceration of the rectum and anus may be rapidly arrested by the same means The repeated application of the fluid extract will relieve the irritation and lessen the size of hæmorrhoidal tumors, and not unfrequently occasion them to shrivel up and disappear A 10 per cent solution of geranium is a useful application in chronic conjunctivitis, granular lids, and corneal ulceration The undiluted extract is without a superior in the treatment of fissured nipples It relieves the pains at once, and forms a protective covering over the painful cracks, beneath which the healing process continues undisturbed Unlike lead, and the commonly displayed agents, it is harmless to the infant, and need not be washed off before nursing

Geranium is an excellent remedy in various forms of disease of the skin characterized by excessive secretion In hyperidrosis and bromidrosis, no more effective plan of treatment can be suggested than bathing the affected parts 3 or 4 times a day with a 30 per cent solution of the fluid extract The flow of perspiration is lessened, the fœtor removed, from a state of despondency to one of comparative happiness Vesicular and purulent eczema, impetigo and pemphigus are benefited by the following lotion

℞ Extract belladonnæ fl	℥i
Extract geranii fl	℥j
Aquæ	℥ij

M

Sig Apply night and morning

The same application will be found both prophylactic and curative in intertrigo, and in eczema and herpes of the genital regions, in persons having a peculiarly delicate skin It is also efficacious in preventing the development and hastening repair of bedsores, and promoting the healing of old indolent ulcers Geranium is the best styptic in the materia medica, but it must not be expected to control the flow of blood from an incised artery It will check venous or capillary oozing, restrain the bleeding of lacerated wounds, and arrest the hæmorrhage following small incised wounds, or various minor operations, more effectually than Monsel's solution, alum, or any of the agents ordinarily employed It must, however, be applied in the proper manner To let a few drops fall on the bleeding point will not be sufficient A small piece of cotton should be soaked in the pure fluid extract and held firmly against the wounded or bleeding surface for a few minutes A piece of sticking plaster or an ordinary bandage may then be applied When this method is adopted stitches need not be inserted unless the wound is deep and the edges gaping Hæmorrhage does not recur, and the healing process begins at once and continues without interruption

Sloughing and unhealthy sores rapidly assume a healthy appearance when continually bathed with geranium Vaginal and intra-uterine injections are rarely necessary after delivery, but when the fœtor of the lochia or other symptoms demand their employment a decoction of geranium or 10 per cent solution of the fluid extract will be as efficacious as solutions of carbolic acid or mercuric bichloride, and far more safe and agreeable to the patient

Pruritus ani and vulvæ are due more frequently than is supposed to minute fissures of the skin of those regions, or to a relaxed and œdematous condition of the mucous membrane, and consequently can often be promptly relieved by the application of a strong solution of geranium

Finally, the fluid extract of geranium, owing to the large percentage of tannic acid which it contains, is a convenient and effective antidote in cases of poisoning by iodine, mercury, silver, copper, antimony, digitalis, conium, gelsemium, tobacco, physostigma, belladonna and aconite

AN INQUIRY INTO THE MORTALITY AMONG PASSENGERS ON VESSELS ARRIVING IN U S PORTS

Read in Section on State Medicine, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY S T ARMSTRONG, M D , PH D ,

PASSED ASSISTANT SURGEON U S MARINE HOSPITAL SERVICE

The question of the mortality among passengers on vessels coming to this country, aside from the cursory interest of the quarantine physician at the port of arrival, seems to have attracted but little attention—in recent years—from sanitarians at large, unless a case of infectious disease appeared at an inland city in a recent passenger on a steamship, in which case the matter became of considerable importance This was illustrated in Chicago last April, when small pox developed in an Italian who had arrived in the city April 1st, the disease appearing April 6th, he having been one of some six hundred emigrant passengers on the steamship "Alsatia," two of whom were affected with small pox *en route*

Thinking that an inquiry into this subject would develop something of interest, I have collected the laws relative to reporting mortality of passengers, and the official records of the Treasury Department concerning this mortality, and present them herewith for your consideration

The Revised Statutes of the United States require (Section 4266) masters of any vessels arriving in the United States or Territories, from any foreign port whatever, to give the collector of customs a list of all passengers taken on board the vessel at any foreign port, in which list the country, age, sex, and occupation of each passenger, and the part of the vessel occupied by each, shall be designated, also, whether any, and what number, have died on the voyage

The Statutes also prescribe (Section 4268) that in case a death shall have occurred among passengers, other than cabin passengers, over eight years of age, on board any vessel arriving in the United States or Territories, it shall be reported within 24 hours, and the vessel shall pay the collector of customs ten dollars for each of these deaths

These laws, with those regulating the number of passengers to the tonnage, the space for passengers, food, etc , cover the legal restrictions of the sanitary affairs of the vessel The enforcement of the latter laws are subject to the perfunctory (if any) supervision of a customs inspector In a paper the writer presented to the American Public Health Association (Transactions, 1885, Vol XI, "Maritime Sanitation"), the desirability of an amendment of the laws was urged, making a medical officer of the United States the inspector in such matters Who can say that instances are isolated like the French steamship Chandernagor, which arrived at New York on April 13, 1887, with 1256 Italian steerage passengers on board, one of them ill with small pox, in which complaints as to lack of food, water, and sufficient sleeping space, led to an investigation, which revealed that although the French law allowed her to carry 1300 passengers, our law (allowing one passenger to two tons) limited her to 990 passengers Though seeming irrelevant, these facts are introduced to call attention to the large population confined, for a variable time, on a vessel, and the favorable conditions for poor food or water, or over crowding, etc , to propagate contagious disease

In the "Annual Reports of the U S Marine Hospital Service," from 1883 to date, a table has been included giving the date of death, name of vessel, port of departure, sex of deceased, and cause of death, if reported, of steerage passengers From these tables the figures contained in Table I have been compiled

TABLE I —EMIGRANT DEATHS

Year	Males	Females	Total	Cause of Death, Unknown, and per cent Total	
1882	109	45	154	65	42 2 %
1883	75	37	112	10	8 9 %
1884	62	43	105	7	6 6 %
1885	50	27	77	7	9 %
1886	44	24	68	14	20 7 %

From Table I it may be seen, 1st, that the mortality among males is almost always 50 per cent higher than in females, and, 2d, that the mortality from unknown or unreported causes is from 6 to 42 per cent of the total number of deaths The first may be explained by the excess of male immigrants, the second, possibly in part to carelessness of ship's officers, but these figures are of some importance as possibly embracing deaths from cholera or yellow fever, as in several instances the vessels came from localities known to be infected Excepting one woman, from Bremen, who died of cholera September 23, 1882, no deaths of emigrants from cholera, yellow fever or small pox are reported during these five years

The small number of deaths — 516 — occurring among so large a number of emigrants, is probably due to the fact that the majority are in the prime of life This supposition is supported by the number dying in the different decennial periods of life, as shown in Table II

TABLE II —EMIGRANT DEATHS, DECENNIAL PERIODS

Age	Unknown	1 to 10	10 to 20	20 to 30	30 to 40	40 to 50	50 to 60	60 to 70	70 to 80	80 to 90
Total Deaths	5	36	43	111	107	72	68	43	29	2

These deaths are so generally distributed in various diseases that statistical tables of the cause of death would be of no advantage

Through the kindness of the Commissioner of Customs and the chief of the Bureau of Statistics, I have secured the figures, in Table III, of the number of cabin and steerage passengers brought to this country during the past five years, and the total number of deaths *en voyage* The figures for 1886 do not include emigrants from Canada or Mexico, and the cessation of Chinese immigration is to be remembered, averaging about 20,000 persons per annum It would have been an interesting accompaniment to have had the aggregate number of days these passengers were on the vessels

TABLE III

Year	Cabin Passengers	Other than Cabin Passengers	Total	Total Deaths	Emigrant Deaths	Per ct of Emigr'nts to Total Deaths
1882	121,571	747,573	869,144	578= 6⁶/₁₀	119	26
1883	118,137	594,378	712,515	465= 6⁵/₁₀	115	25
1884	124,510	524,931	649,441	392= 6 0	108	28
1885	106,362	428,647	535,009	209= 3⁹/₁₀	72	34
1886	99,090	334,013	414 303	175= 4⁹/₁₀	70	40

If we roughly estimate each passenger to have been on the vessel twelve days—rather below than above the average—we can approximate the annual mortality per thousand In Table III, in the column headed total deaths, the mortality per thousand passengers is given, six- to four-tenths of one per cent , this would give an approximate annual mortality per thousand of 18 to 12 per cent , if the passengers remained on the vessel for a year instead of one-thirtieth of that time We therefore see that though, at first glance, the mortality per thousand seems small, for the time the passengers are on the vessel, it is within four to ten per cent of the average mortality (22 5 per cent per thousand) of our American cities

One reason that the mortality should be low is, that only in exceptional cases would any passenger —either cabin or steerage—start on the voyage if ill Also the majority of immigrants, who constitute the greater proportion of the passengers, are in the prime of life, so the mortality is less influenced by the heaviest contributors to its increase in cities, those under 5 years of age and over 55

The most important fact revealed by Table III is the disproportion of the deaths of "other than cabin passengers, over eight years of age" (or emigrants), to the total deaths, varying from 25 to 40 per cent thereof Either the mortality among cabin passengers is extremely large, or there is a heavy mortality among emigrant children under 8 years of age, who are not included in the list of emigrant deaths as returned to the customs officials

When the causes of death are known an examination demonstrates nothing satisfactory, for it is not possible to ascertain, with the data now at hand, the influence of the vessel as a genetic or exciting factor in disease Such knowledge can only be obtained by the continued investigation of steamship surgeons

As from 75 to 60 per cent of these deaths are from unknown or unreported causes, it would seem desirable that an amendment should be made to the law requiring a report of the death of passengers, to the effect that the cause of death shall in all cases be specified, if known

Aside from the statistical value of such information, its utility would consist in permanently recording the mortality on each vessel, and if this was due to local causes, prompting an investigation and relegating the cause to "innocuous desuetude"

MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS —In an article on this subject PROFLSSOR R VOLKMANN gives a masterly review of surgical tuberculosis, beginning with,

I *Tuberculosis of the Skin and Connective Tissue*

1 Lupus is a genuine tuberculosis of the skin, though it is to be considered a special form of tuberculosis, which attacks by preference persons who are slightly or not at all hereditarily infected Clinically it is characterized by its great tendency to local relapse, in contradistinction to other tuberculous affections of the skin Between the latter and lupus there are intermediate forms, and the prognosis of these as compared with lupus is more favorable as to local permanent cure, but worse as to later appearance of tuberculous processes in other localities, tissues and organs

2 *Tuberculous Ulcerations of the Skin*, to be distinguished from lupus, answer mostly to scrofulous ulcerations of older authors They are most frequently found in children and young persons, but are not very common if we except those cases in which they develop secondarily from tuberculous gland abscesses and tuberculous joint- and bone fistulas They are almost without exception permanently cured by surgical interference, without local relapse

3 *Primary Tuberculosis* and its *primary* tuberculous abscesses, of the deeper, especially *intermuscular, parossal* and *para articular connective tissue* layers, are very rare, and must be diagnosticated with the greatest reservation In the great majority of cases these abscesses are connected with specific bone, joint or gland affections, these forming the primary disease The present treatment of these abscesses by free incision and scraping out generally shows this relation plainly When it cannot be demonstrated on the operating table, it must not be forgotten that, particularly in bone, the tuberculous foci from which those apparently primary cellular tissue tuberculoses and para articular abscesses arise, are often exceedingly small, and may be easily overlooked, and, further, that the abscesses not infrequently appear so late that meanwhile the original bone affection is already healed

This holds particularly good for the congestion abscesses of spondylitis (tuberculous caries of the vertebral column) In favorable cases these abscesses may heal by a kind of primary union and without relapse after free incision, washing out with antiseptics, drainage and compression for a few days Out of 57 freely opened congestion-abscesses in spondylitis with gibbus formation during the last few years, 23 healed by first intention, the drains being removed after a few days This shows that the abscess was not longer supplied with pus and products of disintegration of tuberculous tissue from the bone

4 As a *primary affection* tuberculosis of the connective tissue is found chiefly in the panniculous adiposus of small children There develop at once or in rapid succession, a number of small flat knots under the skin (gommes tuberculeuses), which soon

melt and become soft, in a short time generally invading the skin over the area of the affection, so that the skin becomes bluish red, fluctuation becomes more distinct, and finally the abscess breaks For a number of years I have in my lectures called this the *furunculous form of tuberculosis of the skin and connective tissue* These abscesses heal rapidly without relapse when incised early and emptied of pus, fungous granulations adhering to the wall, and large plugs of caseated and necrotic connective tissue Sometimes, however, the process in some of the knots goes deeper instead of invading the skin, and large tuberculous abscesses form under the true skin In such a case we have to deal with a form of tuberculous cellular tissue abscess, that is neither related to diseased bones, joints and tendon sheaths, nor to affections of the lymphatic glands

5 *Tuberculous abscesses*, if they have existed for some time, whether they be primary tuberculous affections of the connective tissue, or connected with joint or bone disease, are always lined with a characteristic violet-gray, or yellow gray, opaque membrane This membrane, which is sometimes several millimetres thick, is only sparingly supplied with blood vessels, especially in the inner layers, which are constantly bathed by tuberculous pus, and contain an enormous number of miliary tubercles, by which it sometimes has the appearance of only consisting of these This abscess membrane is very easily loosened and scraped off from the surrounding tissue (basement substance), often in pieces a square inch in size The tissues forming the basement substance are perfectly healthy, being the seat of a slight reactive induration only Very rarely are the adjoining tissues invaded by diffuse tuberculous eruptions and cheesy infiltrations Only twice in more than 1000 cases of such abscesses freely opened and examined during life have I found a diffuse invasion of tuberculosis into the muscular system, which formed the wall of these abscesses When cheesy matter and diffuse cheesy degeneration of the muscular substance itself is encountered, the case is generally one of syphilis, and cheesy degenerated gummata Here the diseased tissues offer the greatest resistance to the sharp spoon, and cannot be simply torn away, or, even by considerable force, be completely scraped out The characteristic abscess membrane is wanting Both the signs mentioned here serve also in the diagnosis of actinomycotic foci, invading the muscles and sometimes resembling tuberculous abscesses

The characteristic abscess membrane is only found in tuberculous abscesses, and is therefore to be considered an absolutely reliable diagnostic sign

6 The field of the non tuberculous chronic abscesses and so called cold abscesses, as they appear during or after infectious diseases, has yet to be defined by new investigations At any rate it is much narrower than that of the tuberculous abscesses — *Langenbeck's Archiv*, Bd XXVIII, Hft 1

THE OPERATION FOR BENIGN PAPILLOMA OF THE BLADDER —KOCH reports 3 cases operated on by him

Case 1—Man, æt 40, 12 years ago first had urinary trouble, which returned again 3 years ago In 1876 a small piece of papilloma was removed with the catheter From 1879 to 1884 he appeared well After August, 1884, had pain on micturition, and passed a piece of tissue through the urethra When the patient last came for treatment he was very anæmic Examination of the external genitals and *per rectum* revealed nothing special There was severe strangury Urine acid, with much sediment Operation October 29, 1884, by median incision The end of the finger immediately came in contact with a tumor situated high up on the right wall of the bladder Supra pubic cystotomy was therefore performed, without filling the bladder, without a colporynteur, and without wounding any adjacent structures The tumor was pedunculated and as large as a hen's egg It was removed in two pieces by means of stone forceps, and the pedicle cut off with scissors Hæmorrhage was tolerably severe, but was controlled by irrigation A large drainage tube was passed through the perineal and abdominal incisions The patient made a good recovery, and 2 years afterwards there was no recurrence The tumor was a soft villous papilloma

Case 2—Female, æt 34, had complained for 3 years of burning pain on micturition, bloody urine for 15 months Since a few months back several small tumors had been passed *per urethram* On manual palpation of the vagina and abdomen a soft tumor could be felt in the region of the bladder, especially on the right side The urethra was dilated, and by Simon's mirror a tumor was seen as large as a child's fist, and attached to the right wall of the bladder by a pedicle as thick as the thumb This was cut through by means of the index finger and sharp spoon, and the tumor removed with forceps and syringing Eight days afterwards several small excrescences were removed in the same way Two years afterwards there was no relapse The tumor was a soft papilloma

Case 3—Male, æt 21, had had frequent strangury for 3 years, with sudden interruption of the stream, and bloody urine After Easter, 1885, spontaneous micturition was impossible Strong pressure removed small pieces of tissue from the bladder, and the microscope showed them to be papillomatous High fever came on, with pain on pressure in the left side The high operation was performed in June, 1885, and revealed a tumor as large as a man's fist in the bladder, attached by a pedicle to the posterior wall It was removed in small pieces, and the pedicle tied with catgut The bladder was sutured with catgut, and a permanent catheter introduced Dressing changed in 2 days, when urine leaked from the wound Fever continued down Towards the end of June an abscess formed on the left side of the rectum, which was opened externally, and fever went down At the end of July the patient was entirely well, and has remained so

With *cases 1* and *3* the number of reported operations for benign papilloma of the bladder in men now amounts to 41 Of these 19 occurred between the ages of 50 and 70, 16 between 30 and 50 The

youngest patient was 21 years old In 12 cases the tumor was seated on the fundus and posterior wall of the bladder, 10 times on the trigonum and mouths of the ureters, 5 times lateral, and 8 times on the upper wall In consistence they varied from soft villous to tough fibrous masses In all cases the symptoms were about the same The earliest was bleeding, coming on during urination, and not dependent on rest or movement In several cases small pieces of tissue were passed with the urine A further constant symptom was pain and strangury, in many cases with sudden interruption of the stream The diagnosis was made by catheterization, endoscopy of the bladder, bimanual palpation, which generally revealed small tumors, and most certainly by median section and palpation The cases show that suprapubic cystotomy is to be regarded as the normal procedure for treatment, as it alone guarantees a radical operation, that in doubtful cases perineal section is to be made, but generally only for explorative purposes —*Centralbl fur Chirurgie*, No 20, 1887

DETECTION AND REMOVAL OF EMBEDDED NEEDLES —MR H LITTLEWOOD, of Leeds, has adopted the following plan with success 1 The part supposed to contain the needle is thoroughly rubbed over with an electro-magnet, so as to magnetize the metal if present 2 A delicately balanced magnetic needle is held over the part If the needle is present, its position can be ascertained by the attraction or repulsion of the poles of the magnetic needle 3 Having ascertained the presence of a needle (e g, in the hand), the part is rendered bloodless, and a grain or more of cocaine injected hypodermically 4 An incision is made over the ascertained position of the needle 5 The electromagnet is then inserted into the wound, and with it the needle is felt for Sometimes it will be found and removed quite easily, at others great difficulty will be experienced, taking as long as one-half or three-quarters of an hour This may be due to the fact that its position has not been accurately ascertained, it may be lying across the incision, or it may be so firmly embedded in the tissues that the electromagnet is not able to withdraw it If this occurs the incision must be enlarged, and the edges held apart with some non magnetic retractors, using the electro magnet as a guide, the needle may be seen and removed with forceps If the needle is firmly fixed, the following plan has been adopted by placing the positive pole of a galvanic battery on the surface of the body, and the negative pole in direct contact with the needle, this becomes loosened by electrolysis and can then be easily removed by the electro magnet This latter method has been found useful in two cases for the removal of sewing machine needles that had transfixed the end of the finger, and were so firmly fixed as not to be removable by forceps The electrolytic action loosened the needles so that they could be removed quite easily

I have now removed six needles from the hand and a piece of steel embedded in the foot In none of the cases could I feel the piece of metal or be sure of its presence without the aid of the method above described As it requires some expensive apparatus, and sometimes takes a long time, I am afraid this method will not become general, but it is well worth the time and trouble spent if in the end one is successful, as patients really suffer a good deal of pain and anxiety if these foreign bodies are allowed to remain embedded in the tissues —*Lancet*, Aug 27, 1887

NEW METHOD OF VENTILATION —A plan for ventilating a room, which is, we think, sound in principle, has been invented by Messrs Young & Moss The ordinary fireplace is used to create a draught The outlet from the room is close to the ceiling, from this point a tube descends, making a bend at the floor level, and reaching the exit at the commencement of the chimney Between the floor bend and the exit is a cylindrical air chamber, which is said to efficiently prevent any back current into the room The apparatus can be fitted to any ordinary fireplace, and in the drawing furnished is shown in connection with the well known "country parson's" grate The ventilator is concealed by an ornamental panel, and, if uniformity be desired, a panel on the opposite side may be furnished and fitted for a coal scuttle The plan adopted by Messrs Young & Moss seems to us feasible and practicable When, however, a "ventilator" is ordered, it must always be borne in mind that an "outlet" is only half that is necessary If inventors wish their apparatus to succeed, they must insist on properly placing inlets also If this be not done, in proportion as the outlet is efficient so will the cold air come whistling under doors and through cracks and keyholes, and the use of one or other device for the "exclusion of draught" will be the inevitable result —*Lancet*, October 1, 1887

QUEBRACHO AS A TOPICAL APPLICATION —BOURDEAUX calls attention to this use of quebracho He uses the alcoholic extract diluted with water He finds it an energetic astringent and a promoter of cicatrization In burns in the stage of granulation it is preferable to iodoform In crushed and lacerated wounds healing takes place without the production of pus or symptoms of inflammation under the influence of a few applications of the quebracho solution When applied to a wound it dries quickly, leaving a deposit or covering under which healing goes forward rapidly It may be taken internally advantageously in dysentery (20–30 drops) In endometritis and ulceration of neck of womb it is valuable, one teaspoonful being dissolved in large cupful of water and used as an injection It is peculiarly useful, taken internally, in asthenia —*Centralblatt fur Chirurgie*, No 41, 1887

OIL OF SASSAFRAS AND IODOFORM —According to MR C E DODSLEY the addition of gtt iv of oil of sassafras to ℥i of iodoform completely covers the disagreeable odor of the latter, and the odor of the oil itself is not noticeable —*New York Med Journal*, Oct 8, 1887

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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KREATIN AND KREATININ —ARE THEY WASTE OR NUTRITIOUS PRODUCTS IN THE ORGANISM ?

This question is of interest not alone from a purely physiological point of view, but also from the clinical standpoint, since the substances are part of the extractives of beef extracts, and may play an active part in rendering the latter nutritious and stimulating Kreatin is known to increase in muscle when it is made to contract Kreatinin is found in the urine, where its amount increases when injected into the blood It is also found in larger quantities in the renal secretions when a person lives upon meat than when upon a purely vegetable diet Its quantity is also increased in acute diseases and in chronic anæmic disorders, and is diminished in convalescence

Chemists generally assert that both of these substances are formed in the organism by oxidation of proteids, and that they are substances formed as intermediate products of the final conversion of proteids into urea, carbon dioxide, water, etc They have therefore been regarded as waste products Dr T J Mays[1] has asked, however, the question with which we began these remarks He was led to it from a study which he prosecuted to determine the nutritive and stimulating value of beef extracts This he found considerable even when the amount of albumen present was so small that it could hardly be the active agent in them He sought, therefore, in the extractives for some nutritive substances The extractives of beef extract are chiefly kreatin, kreatinin, sarkin, xanthin, carnin and inosite To test their nutritive and stimulating power he made use of the frog's heart in the following way When a 6 per cent saline solution is passed through the heart it gradually ceases to beat Water, acids and alkaloids do not revive it, but blood, milk and beef extract will cause it to renew its wonted rhythmical movements So also, and to fully the same extent, kreatin and kreatinin are found to stimulate and nourish the heart muscle Dr Mays found that "after working for many hours with a frog's heart, and after it became so thoroughly exhausted as to refuse to respond any longer to the stimulant action of blood, the transfusion of kreatin or of kreatinin *in the* proportion of one part to one or two thousand parts of saline solution would at once spur it on to renewed contractions, which were continued for some time longer "

Sarkin and xanthin have to a very limited degree the same action upon the heart muscle The other extractives of beef extract are without activity

Although asparagin, theïn and caffein are very similar to kreatin and kreatinin in chemical composition, the former substances do not possess the power of exciting and recuperating the wearied heart muscle

These facts lead us to look upon kreatin and kreatinin as substances of nutritive value And the character and degree of stimulation of the heart muscle by them so exactly corresponds to that of beef extract solution that we must look to them as the active stimulating principles of this solution

The author does not reason further in regard to the nature of these substances, but their behavior suggests to us the query, whether kreatin and kreatinin are not the products of cellular action on the albuminous substances in the blood and interstitial spaces, products prepared by the tissues for their own use, and representing a part of the intimate constructive changes that food undergoes after solution in the alimentary tract and introduction into the blood

[1] "The Physiological Action of Kreatin Kreatinin and their Allies" By Th J Mays The Practitioner October 1887

THE DEATH OF VON LANGENBECK

In the death of PROFESSOR BERNHARD VON LANGENBECK the surgical world has sustained a most severe loss, and thousands of his pupils, in every land, will deplore the stroke that has removed one of the greatest surgeons of all time And his pupils, those whom he has taught, are not only those who have learned from his lips, but every surgeon may justly claim to have been taught by him In the words of a well known German surgeon "Langenbeck was one of the first surgeons of the new era,

genial and inventive, a masterly operator, a fine therapeutist, beyond comparison in personal experience, of inexhaustible perseverance" He devised many new operations and improved many old methods of operating, and his contributions to conservative surgery by the use of resections, subcutaneous osteotomies, osteoplastic operations and tenotomies are alone sufficient to have given him a lasting reputation

Von Langenbeck was born at Horneburg, in Hanover, in 1810, and was graduated from the University of Gottingen in 1835 Shortly after this he established himself in Gottingen as Privat-Docent in physiology, and began to practice surgery Soon afterwards he was made Professor Extraordinarius, and in 1842 he went to the University of Kiel as Professor of Surgery and Director of the Friedrichs Hospital In 1848 he became connected with the army, and directed the surgical department in the hospitals during the war of the Duchies against Denmark In this year he was called to Berlin to succeed Dieffenbach, becoming, at the age of 38, Professor and Director of the Berlin Royal Surgical Clinical Department, the greatest surgical clinic in Germany His reputation was in a great measure made by the ability displayed by him in the three wars against Denmark in 1864, Austria in 1866, and France in 1870 He was ennobled by the King of Prussia after the Danish war in 1864

Sir William McCormac, who became acquainted with him during the Franco-Prussian war, says He was not less beloved as a man than renowned as a surgeon and teacher The surgical professors in most of the great Universities (W Busch, Wilms, von Bergmann, Nussbaum, Billroth, Volkmann, Socin, Konig, Schoenborn, Trendelenburg and others) have been among his favorite pupils and assistants, so that the influence of his teaching has spread far and wide Personally he was beloved in a rare degree as a man of spotless honor, sympathetic and affectionate, and with the warmest domestic affections Mainly through his example did conservative surgery obtain a sure footing in military practice His results in regard to excision of joints, especially the ankle and wrist, are most remarkable, and his keen observation told him the frequent possibility of saving the limb when the knee had been perforated by gunshot None could be more dexterous as an operator He was bold beyond most men, and his knife was always guided and controlled by profound anatomical knowledge He possessed a capacity for work which was simply astonishing His habit was to rise at 4 every morning, drink a cup of coffee which he made himself, and begin his literary work

In 1860 he started the *Archiv fur klinische Chirurgie*, commonly known as Langenbeck's *Archiv*, and edited it, with the assistance of Billroth and Gurlt, up to the time of his death In this may be found most of his numerous contributions to surgical literature It was through his efforts that the Association of German Surgeons was formed He was chosen its first President, the office being an annual one, but at the end of the year he was re-elected, and was finally made perpetual President Five years ago his failing health compelled him to remove from Berlin to Wiesbaden, and the remainder of his life was spent in the beautiful home which he built for himself on the slope of the Nersberg Not long since he submitted to operations for cataract, which seemed to be successful He died of cerebral apoplexy on September 29, and on October 5 was buried by the side of his wife in the cemetery at Berlin

"A great and rare man is gone," says Guttmann, "gone the eminent teacher, the great master, the Nestor of German surgery, the ornament of our State and University, where thousands have sat at his feet and received instruction from his lips"

INDIRECT AND IMPROPER ADVERTISING

We frequently receive from some of those who have advertisements in the advertising pages of THE JOURNAL, printed slips ingeniously calling attention to the value or peculiar quality of one or more of the articles they advertise, couched in such phraseology as to appear to have been written by the editor of THE JOURNAL, accompanied by a request to give such slips a place in the columns of THE JOURNAL for reading matter We have uniformly refused to use such slips, and for the following reasons 1 In making a contract with an advertising patron for a given space in the advertising columns and for a certain sum, there is no condition either expressed or implied that he shall have any additional space in any other columns not devoted to advertisements 2 If we should accept such slips and place them in our reading columns as though they were expressions of our own opinion concerning this or that article, when they were actually only the interested expressions of the manufacturers or advertisers themselves, we would be practicing a direct fraud upon our readers This reason alone, is abundantly sufficient to deter us from yielding to any such use of our columns Not a few enthusiastic manufacturers of medicines, formulas, foods, etc , appear to think we should ac

tually test by clinical use every new thing, and every new combination of old things, they choose to send us, and express either by certificate or through the columns of THE JOURNAL, our most gratifying approval It seems never to have entered into the thoughts of such parties, that such a task would require us to devote *all our time* to that work, and make *all* our patients subjects for *experimental* dosing, leaving us neither time to edit THE JOURNAL or even to tabulate the results of our heterogenous experiments on suffering humanity

It is proper for physicians to use cautiously and judiciously such new remedies as may reasonably be presumed to possess valuable properties in the treatment of disease But to obtain reliable results, such use must be extended through a large number of cases, the correct diagnosis of which has been assured, and only an actual clinical record of such cases becomes appropriate and desirable material for the reading columns of medical journals

THE DEATH OF FREDERICK HYDE, M D, Professor of Surgery and Dean of the College of Medicine of Syracuse University, N Y, was announced Oct 17, 1887, at the age of 80 years The deceased had long been known and recognized as one of the most honorable and intelligent members of the profession in the State of New York The following report adopted at a meeting of the Faculty of the Syracuse University, on the evening of Oct 17, correctly voice the sentiments of all who have the pleasure of an acquaintance with Professor Hyde

In the full possession of his mental faculties, with eye undimmed and natural strength unabated, our beloved dean, Dr Frederick Hyde, at the advanced age of four score years, has been called from his life of incessant unselfish labor to his rest and eternal reward

As colleagues we unite in mourning his loss with that large community where he was revered for his unswerving integrity and his active devotion to the best interests of society, with the church of which he was a consistent and influential member, and with his stricken family who, while they miss with anguish, remember with gratitude and pride, his affection, his kindness, his sterling character and that "purest treasure mortal times afford, a spotless reputation"

Extensively known by his valuable contributions to surgical literature, and by his early and continuous advocacy of a higher standard of medical education, Professor Hyde was a prominent founder of our University College of Medicine, and he has worthily filled the office of dean since the beginning, fifteen years ago

His associates and the students in the medical school which he loved and to which he devoted so much valuable time, will miss his gentlemanly presence, his genial manner, his wise and encouraging counsel, and his learned teaching

We all bear ready and unreserved testimony that his influence has always been salutary, at once a stimulant and a benediction

As a slight token of our respect and affection, we will follow his mortal remains to their resting place to morrow

H D DIDAMA,
WM MANLIUS SMITH,
W F PLANT

GLEDITSCHINE OR STENOCARPINE —Investigations of specimens of this new remedy, obtained from Messrs Lehn and Fink, of New York, at the laboratory of Messrs Parke, Davis & Co, appear to prove the said remedy to contain 6 per cent of cocaine and probably some sulphate of atropia, while the leaves of the Gleditschia triacanthus, from which the stenocarpine is supposed to have been derived, contains but a very small quantity of an alkaloid, and that without active anæsthetic properties Is the new remedy an attempted imposition upon the medical profession?

SANITARY CONVENTION AT ALBION, MICHIGAN —A Sanitary Convention, under the auspices of the Michigan State Board of Health, will be held at Albion, on Tuesday and Wednesday, Dec 6 and 7, for the discussion of important topics relating to the sanitary interests of the people Citizens generally are invited to attend Prof Delos Fall is Chairman of the Local Committee, and Dr H D Thomason, of Albion, Secretary

A NAVAL MEDICAL EXAMINING BOARD is now in session at the Naval Hospital, Philadelphia, Penn, for the purpose of examining candidates for admission to the Medical Corps of the Navy Circulars of information can be obtained on application to the President of the Board There are twelve vacancies in the list of Assistant Surgeons

DISTRICT MEDICAL SOCIETY OF CENTRAL ILLINOIS —This Society will hold its Semi-Annual Meeting at Vandalia, Ill, on Tuesday, Nov 1, 1887 An interesting programme of work has been provided

DR JAMES KNIGHT, Surgeon-in Chief of the Hospital for the Ruptured and Crippled, of New York, died on October 24 after a brief illness He was the founder of the Hospital He was born in Maryland in 1810, and was graduated from the Washington Medical College of Baltimore in 1832

SOCIETY PROCEEDINGS.

ST LOUIS MEDICAL SOCIETY

Stated Meeting, September 21, 1887

THE PRESIDENT, S POLLAK, M D IN THE CHAIR

DR WALTER COLES read a paper on

POSTHUMOUS DELIVERY

In considering the subject of post mortem delivery, several questions of practical importance naturally present themselves, which we will endeavor briefly to consider

1 As to the power of the child to survive somatic death of the mother, and the duties and responsibilities of the medical attendant in cases of sudden death of the mother at or near full term

2 As to the capability of the uterus to contract and expel its contents after death

3 The effect of gaseous distension, the result of decomposition, as an expulsive force

The second and third of these inquiries are chiefly interesting in a medico legal point of view, but the first is an eminently practical one, of grave importance, which may suddenly confront any one of us, at any moment, and from its very nature, will require prompt and decisive action Cases are not rare where from heart clot, or other causes, women have died in labor, or at an advanced stage of pregnancy In such an emergency, actual death being assured, the question of saving the child naturally arises, and the physician should be possessed of such knowledge as will direct him when and how to act under these trying circumstances

All obstetrical writers agree that the fœtus may survive the death of the mother for a certain length of time, and it is also a well known fact that an immature child will retain its vitality longer than one at full term Numerous instances are recorded in which living children have been extracted, both by turning and the Cæsarean section, after the death of the mother Blundell mentions the case of a woman who was run over by a car, which crushed the liver and produced instant death The dead body was taken into the hospital near by, when, seeing that she was in an advanced stage of pregnancy, the abdomen was opened and a child delivered, which, though apparently dead, he succeeded in resuscitating The same author relates the still more remarkable case of a pregnant heifer, whose uterus was opened three-quarters of an hour after death and a living calf extracted I well remember hearing my father say that he had reared a fawn which he had cut from the uterus of a dead doe It may be remarked here that the lower animals are said to perish sooner in utero than the human subject

Authors differ widely as to the length of time at which asphyxia may be overcome and the child restored Most of us have doubtless seen resuscitation take place after the lapse of many minutes, and hope should never be abandoned as long as there is the slightest heart beat Most cases prove hopeless after fifteen minutes, but the numerous authenticated exceptions, where respiration has been established after much longer periods have elapsed, should encourage persevering effort, and lead us to give the child the benefit of the doubt in all cases where the death of the mother is well established It is probable, owing to the temperature of the mother's body, that the asphyxiated child will retain its vitality much longer within the uterus than outside of it Aveling believes that the child may thus survive in the womb many hours after the death of the mother Villeneuve, in a published paper in 1862, reports a number of cases in which it was ascertained that children survived during astonishly long periods Four were saved by the immediate performance of the Cæsarean operation Five were extracted alive after a lapse of ten to thirty minutes Two children were saved after the mother had been dead two hours, one after two and a half hours, one after three hours, and one after four and a half hours In referring to these latter cases, Tarnier remarks "Although the operation is generally useless at a later moment, it ought, nevertheless, to be performed, because some cases, whose authenticity I cannot vouch for, would seem to prove that the child's life may remain intact for ten, fifteen, or even twenty-four hours" Charpentier, one of the latest French authorities, is disposed to discredit these cases, however, and claims that none of them are sufficiently authentic to merit belief

In all cases when it becomes necessary to effect post-mortem delivery we have the choice of two methods we may resort to hysterotomy or else to forcible delivery through the natural passages When death occurs during labor, and we find the os well dilated or dilatable, we may readily perform version, or if the head be within reach, forceps may be applied The distressing circumstances requiring either operation will often prompt friends to interfere, and prevent any interference on the part of the physician His duty, however, is plain, and nothing should deter him from at least urging an immediate operation if he is satisfied that the woman is dead, and that there is hope for the child By far the simplest and safest method of rescuing the child is by laparotomy, but this may be interdicted by friends who, at the same time, might not object to an attempt *per vias naturales* In choosing between these methods of delivery it should not be forgotten that several instances are recorded in which the terrible blunder has been committed of opening women who were not really dead.

Some writers have gone so far as to advise a resort to forcible delivery whenever the mother is *in extremis* Such an idea, however, except under peculiar circumstances, is revolting, and should be repudiated We quite agree with Charpentier when he says, should the woman be *in extremis* "Respect her condition, and do not hasten her end by maneuvers which may not save the child Once the mother is dead, however, act quickly in the interests of the child

In *accouchement force*, we should not lose sight of the fact that the uterus is endowed with the power of independent contraction after death, a property which greatly aids the physician in effecting delivery, notwithstanding he is deprived of assistance through

the cerebro spinal system Where the pelvis is ample, he may overcome any rigidity or resistance in the soft parts, if necessary, by free incisions It is a recognized fact that the body of the uterus is under the dominance of the sympathetic, while the chief supply from the cerebro spinal system of nerves is distributed to the cervix and external os The effect of somatic death, therefore, is to paralyze the latter class of nerves, and hence to produce a relaxation of the outlet to the womb, rendering those parts readily dilatable, and thus, in many cases, preparing the way for artificial delivery

As to the influence of death upon the uterus, the fact that the womb does not cease its muscular activity when the vital spark departs from the body is so well known as scarcely to need an argument Dewees says "However much this circumstance may excite our surprise, or challenge our belief, it is, nevertheless, authenticated by various testimony" We may add that this power of post mortem contraction has been observed repeatedly in lower animals, as well as in the human subject Harvey observed it in the doe, William Hunter in the cat and rabbit, Mueller noticed it in the uterus of the rat and oviduct of the turtle, while Tyler Smith has seen it in the guinea pig and other animals It has been observed in women in very numerous instances where the Cæsarean operation has been practiced shortly after death, and also where the hand has been passed into the uterus for the purpose of turning or delivery of the afterbirth Montgomery, Levret and others cite cases in which the uterus not only contracted down upon the child during artificial delivery, but in which it was subsequently difficult or impossible to introduce the hand for the purpose of securing the placenta These facts would indicate that the uterus is capable of exerting a very powerful influence in the post mortem expulsion of its contents, a force which has been variously estimated at from five to eighty pounds True, in most of the computations of this power in the living subject, it has been difficult to eliminate the factor of coordinate muscular assistance, but when we come to reflect that paraplegic women have brought forth children, we must concede that parturition is mainly accomplished by uterine effort Playfair adduces a most practical and conclusive argument in support of this position He says "There are many facts in the history of parturition which make it certain that the chief factor in the expulsion of the child is the uterus Among these may be mentioned occasional cases in which the action of the abdominal muscles is materially lessened, if not annulled—as in profound anæsthesia, and in some cases of paraplegia—in which, nevertheless, uterine contractions suffice to effect delivery The most familiar example of its influence, however, and one that is a matter of everyday observation in practice, is when inertia of the uterus exists In such cases no effort on the part of the mother, no amount of voluntary action that she can bring to bear on the child, has any appreciable influence on the progress of labor, which remains in abeyance until defective uterine action is reestablished, or until artificial aid is given" We thus see that while, in the dead woman, the power of uterine contraction is temporarily preserved, the rigidity in the soft parts, through which the child has to pass, is reduced to a minimum, the tendency being to push the fœtus in the direction of least resistance

This brings us to the consideration of spontaneous post mortem parturition, a phenomenon which is now recognized by universal obstetrical authority Dilatation of the os and the commencement of labor is often excited *in articulo mortis*, as has been demonstrated both in the human subject and in the lower animals This tendency to the precipitation of the parturient process in the dying is doubtless greatly modified by the mode of death Many diseases and accidents, such as coma, apoplexy, cholera, or in fact any condition tending to deoxidize the blood, will promptly excite uterine activity Such being the condition of things at the moment of death, the occurrence of *posthumous* extrusion of the fœtus should not be a matter of surprise, when we reflect that the uterus is capable of vigorous post mortem contraction, that the uterine contents are subjected to *rigor mortis*, and finally to very powerful gaseous pressure, the result of decomposition This latter must prove a most important factor, especially in cases of early pregnancy At a recent inquest held in this city upon the body of a young woman, far advanced in decomposition, the uterus was found inverted and protruding from the vaginal outlet, while a fœtus of about three months, with its membranes, was discovered in the clothing cut from the corpse This case has created some controversy, but it would not seem to be unique, since, as Tyler Smith remarks "Cases are related in which the fœtus has apparently been expelled some days after the death of the mother by gaseous distension of the abdomen" Tidy, in his "Legal Medicine," vol i, p 85, says "It is recorded that gases generated in the abdomen have been sufficient to force fæces from the bowels, urine from the bladder, and even a fœtus from the uterus" Montgomery remarks that "The occurrence of delivery after the life of the mother has become extinct, and consequently effected by the independent contractile power of the uterus, has been attested by so many authors of established credit, that we cannot refuse it our belief, having received the testimony of Fodéré, Buffon, Leroux, Levret, Baudelocque, Bichat and others" Prof Hermann, of Berne, relates the following case in point "On the third day after the death of a young woman who was in the sixth month of pregnancy, the nurse heard a loud noise proceed from the corpse A physician was immediately sent for, who on his arrival, found the deceased had brought forth twins, which were enclosed in a membrane quite entire, and not in the least putrid The placenta only appeared to have suffered from the effects of putrefaction"

In a discussion of this subject before the Medico-Legal Society of Paris, Pinard related the case of a young woman who died in July, 1872, at about the fifth month of pregnancy When the body was raised to be placed in a coffin thirty six hours after death, a fœtus fell from between the legs of the corpse On examination the uterus was found inverted and pro-

truding from the vaginal outlet, with the placenta still adherent In the Transactions of the London Obstetrical Society for 1872, Dr Aveling reports thirty cases of posthumous birth In one of these cases the child was born alive The same writer concludes as the result of his investigations, that the uterus may expel its contents after death even though there be no preexisting symptoms of labor, also that expulsion of the placenta, evolution of the fœtus prolapse, inversion and rupture of the uterus may all take place post-mortem

As before remarked, these cases are chiefly interesting as matters appertaining to medical jurisprudence But they are not difficult to explain when we consider the various forces which are brought to bear upon the uterine contents both at the moment of death and subsequently thereto And it is quite likely that could the grave reveal its secrets, instances of spontaneous post-mortem parturition would be found far more frequent than is generally supposed

By no means the least interesting feature connected with posthumous delivery is the occasional occurrence of inversion of the uterus When this condition was first called to the attention of the profession, it was looked upon as a very remarkable phenomenon, not likely to occur spontaneously, and hence signifying some suspicious outside interference This was the interpretation hinted at by Pinard in the case related by him before the Medico Legal Society of Paris, and endorsed by Taylor in his well known work on "Medical Jurisprudence" But now that there is other authority for believing that inversion can occur spontaneously, even in the earlier months of pregnancy, we are compelled to seek an explanation in the physical conditions which naturally follow death and attend upon decomposition and gaseous distension of the abdomen We have already seen that the immediate effect of somatic death is to relax the circular bundle of muscular fibres which surround the cervical zone of the uterus, while the muscles of the fundus and body retain their activity, the effect being to force the body of the organ down through the patulous and passive os and cervix, thus according exactly with the *modus operandi* of this accident in life, as elucidated by Prof Isaac E Taylor, of New York, when he declares that "spontaneous active inversion of the uterus rests upon prolonged natural and energetic action of the body and fundus, the cervix, the lower part, yielding first, is thus rolled out, or everted, or doubled up, as there is no obstruction from the contractility of the cervix, which is at rest, or functionally paralyzed, the body is gradually, sometimes instantaneously, forced lower and lower, or inverted"

Even where inversion is not completed during the period of active contraction of the fundus and body of the uterus immediately following dissolution, it is quite easy to conceive that the process may be thus commenced, and a physical condition brought about which would render complete inversion of the organ both natural and easy, as the result of the pressure brought to bear through subsequent decomposition upon its flaccid and yielding walls

NOTE —Since reading the foregoing paper, Dr M H Post has informed me that in 1872, while he was an *interne* at the Female Hospital in this city, a case of post-mortem parturition occurred at the institution, a case which bears out the point I make, that uterine contractions are frequently excited *in articulo mortis* In this instance a woman about seven months advanced in gestation died of acute pneumonia There were no symptoms of labor prior to death, but a short time afterwards it was discovered that a child had been born, which breathed a few times after being expelled

AMERICAN GYNÆCOLOGICAL SOCIETY

Twelfth Annual Meeting, held in the Hall of the Academy of Medicine, New York, September 13, 14 and 15, 1887

(*Concluded from page 538*)

THURSDAY, SEPTEMBER 15,—THIRD DAY

DR A MARTIN, of Berlin, said that the principal objection to the dropping of the pedicle is the danger of hæmorrhage This danger he thought did not exist In Berlin it is the practice to treat the pedicle with Esmarch's constricting apparatus In removing the body of the uterus, a V-shaped excavation is made in the cervix The upper portion of the cervical canal is then dissected out, and the lower portion carefully disinfected The cavity thus formed is brought together with sutures Next the two flaps of the cervix are united, and then the edges of the peritoneum are brought together In this way danger of hæmorrhage is avoided He thought that the method of fixing the pedicle will have little influence on the development of sepsis Many of these patients die from the effects of their disease The intra-peritoneal method of treating the pedicle is certainly the ideal method Up to the end of 1886, he had had 84 supra-vaginal amputations of the uterus Of this number 10 died of sepsis and 17 died of collapse following embolism This series included a number of very unfavorable cases Of his last 30 supra-vaginal hysterectomies he had lost three

DR A R SIMPSON, of Edinburgh, thought that we could not say that either method of treating the pedicle is the best in all cases Each case must be decided by the conditions met with in that particular case He thought that in the treatment of fibroid tumors the clamp would hold its ground, for the reason that in this way the pedicle can be secured in a much shorter time, and this is an important point Dr Bantock had objected to the use of iron He agreed with him that the solution of the perchloride should not be used, for it is difficult to confine a liquid to the desired point, but the persulphate in the form of a powder does not offer this objection He had used this in combination with iodoform and bismuth powdered over the stump with entire satisfaction

DR H MARION SIMS, of New York, had employed the extra-peritoneal method in the hysterectomies which he had performed He had seen his father

employ the intra peritoneal method with such unfavorable results that he had feared to try it He had had eight cases, of which two died of sepsis the result of sloughing of the stump

Dr Mathew D Mann, of Buffalo, had had six cases in which he had removed the uterus or fibroid tumors from the uterus In the first case where he removed a fibroid tumor weighing fifteen pounds, he encircled the pedicle with a ligature and dropped it Six hours later the woman was in a state of collapse from hæmorrhage He opened the abdomen and secured the pedicle with a wire clamp and the woman recovered Since then he has always used the clamp All his cases have recovered in the after treatment of the stump He rubs it with iodoform, packs cotton around it, and leaves it exposed to the air In this way it dries quickly and becomes perfectly hard

Dr Bantock in closing the discussion, calls attention to the fact that while his mortality from the extra peritoneal method of treating the stump had been 12 in 72 cases, that of Dr Martin in the intra peritoneal method had been 27 in 84 cases The number of cases is, however, not large enough to be of much value The proportion of septic cases with the intra peritoneal method was greater than with the extra peritoneal method

Dr Robert Battey, of Rome, Georgia, read a paper on

BATTEY'S OPERATION, ITS MATURED RESULTS

In August, 1872, the author performed his first operation for the removal of the functionally active ovaries for the relief of otherwise incurable troubles Up to the present time there have been no statistics as to the ultimate effect of the operation Reports have been given showing the immediate results, but none showing the results on the affection for which the operation was performed All the cases reported in this paper had been traced carefully up to the present time, they were all the subjects of a complete Battey's operation, and had all been operated on a year or longer The following conclusions were presented

1 The change of life is the most important factor in securing the complete result of this operation

2 In exceptional cases the cure almost at once follows the operation, but in the vast majority of cases the patient must pass through the ups and downs incident to the change of life before the restoration to health is complete

3 The length of time required to pass through the nervous and physical perturbation attendant upon the change of life is variable It may be one year or it may be three or five years

4 Of the cases operated on a few were, no doubt, badly selected, and the proper selection of cases is a problem yet to be solved

5 Patients who have become addicted to the habitual use of morphia, opium, chloral or alcohol, cannot be restored to health until the pernicious habit is abandoned

6 Cases which are the proper subjects of this operation if allowed to suffer eventually, reach a stage where they became absolutely incurable by any operation

7 In a number of cases the patients were in no wise benefited by the operation In several of these the indications seemed clear and unmistakable

8 In some cases neuralgic pain remained How much this was due to an unabsorbed ligature was a question to be considered

9 A careful analysis of the cases seems to show that the removal of the tubes with the ovaries had no influence in the establishment of the menopause, the only effect of their removal being on the disease of the tubes themselves

10 The operation is not an infallible one The percentage of failures recorded is a notable one, but when it is remembered that the cases included are only those otherwise incurable, each case cured is a positive gain A like percentage of cures in cases of cancers of the uterus or of cancer of the breast would be an achievement of the greatest magnitude

Dr A W Johnston, of Danville, Ky, read a paper on

THE INFANTILE UTERUS

He called attention to the fact that the uterus was composed of two distinct portions, the body and the neck, the relation between the two being almost the same as that between the stomach and the pylorus The non development of the uterus may result from various causes such as injury, etc The growth and function of the endometrium was referred to at length The author had discovered a branch of the sympathetic nerve entering the uterus and the attachment of the Fallopian tube, and he thought it probable that the uterus received its physiological orders He held that it was not the removal of the ovaries and and tubes that brought on the change of life but it is the neurotomy which the removal of these organs necessitates From this he argued that the arrest of the growth of the uterus was in all probability due to interference with this nerve supply An acute neuritis may often pass unrecognized One of the most marked symptoms in these cases is pain resulting from the efforts of the endometrium to perform a function for which it is not capable In the management of these cases it seems that in some of the simpler ones a certain amount of benefit is derived from the use of stem pessaries and from galvanism In the majority of cases of corporeal deficiency he considered it undesirable to induce the menopause, but in some cases where the ovaries remain large and tender this operation may be resorted to In conclusion the author said "if we wish to have a clear idea of the physiological position of the uterus we must emancipate it from the thraldom of the ovaries in whose secure grasp it has been held for the last fifty years "

Dr R S Sutton asked if Battey's operation consists in the removal of the ovaries alone and if in the 54 cases reported the removal of the ovaries alone brought on the menopause in 50 cases?

Dr Theophilus Parvin asked Does Dr Battey find the ovaries invariably diseased and how often is there associated disease of the tubes?

DR LLOYD ROBERTS, of Manchester, England, asked Dr Battey as to the condition of the uterus in the cases reported

DR WM M POLK asked what is the condition of the ovaries that demands removal? Can we after the abdomen is opened, tell by the appearance of the ovaries whether they should be left or removed?

DR BANTOCK said that he had always understood Battey's operation consisted in the removal of the perfectly normal ovaries He asked if this is the correct idea

DR BATTEY, in replying to the various questions, said that he did not restrict the term Battey's operation to the removal of the ovaries The removal of the ovaries is not a necessary constituent of the operation Battey's operation consists in the induction of the menopause, no matter in what way it is brought about The removal of the ovaries does not always bring about the menopause, the removal of the ovaries plus the tubes, does not invariably cause the menopause, the removal of the ovaries plus the tubes, plus the uterus does not always bring about the menopause In his experience the ovaries are always diseased, but this is simply an accident of the operation, the operation is not done for the removal of diseased ovaries Battey's operation is not normal ovariotomy He entirely repudiated that term As a rule he removes only the ovaries, but in a small proportion of cases he removes the tubes, but only when the tube is the seat of positive disease such as pyo salpinx or hydro salpinx The condition of the uterus varies in each case He does not insist upon visible changes in the ovary to justify its removal but rests for his justification on the urgent necessities of the case and on the fact that nothing else effective has been proposed He does not operate until all other measures have failed

DR THEOPHILUS PARVIN, of Philadelphia, read a

NOTE ON THE IMPORTANCE OF THE USE OF ANTISEPTICS IN PRIVATE OBSTETRIC PRACTICE

The question as to the necessity for the use of antiseptics in hospital practice has been settled, but private practice their use is often omitted, chiefly perhaps on account of the trouble and expense involved The puerperal woman should be as carefully treated in private practice as in the hospital ward While an obstetrician may attend many cases of confinement without a death from septicæmia yet he may have had many cases in which the woman had been crippled as a result of this affection The day is coming when if a case of puerperal septicæmia occurs in the practice of an obstetrician who does not employ these precautions he cannot escape the censure of his professional brethren or of his own conscience In order to facilitate the use of these agents the author had prepared a small case containing articles often required in the treatment of a case of confinement The case contains corrosive sublimate tablets, strong silk for ligating the cord, antiseptic catgut, laudanum, ergot, carbolic acid and tablets of per sulphate of iron There is also a flexible catheter, tenaculum, laryngeal tube, needle holder, scissors, lancet, needles and silk-worm gut for closing tears of the perineum and within the vagina

DR LAWRENCE, of Manchester, Eng, pursues the following plan During the progress of the labor the vagina is several times washed out with a warm solution of carbolic acid 1 200 Within half an hour after the removal of the placenta he inserts a suppository of iodoform containing 25 grains This is then used night and morning and the discharge remains inoffensive

DR A R SIMPSON, of Edinburgh, called attention to the value of turpentine in cleansing the hands Even after the examination of a case of cancer the use of turpentine will render the hands perfectly clean

DR REED, of Glasgow, said that he never examines a woman without using antiseptics He carries in his pocket papers containing 10 grains of the bichloride of mercury and dissolves one of these in a pint of water and uses in for washing his hands As a lubricant he uses a preparation consisting of 3 parts of pure soft soap, 1 part of glycerine, and 5 per cent carbolic acid This is kept in a collapsible tube such as painters use

DR HOWARD A KELLY, of Philadelphia, is in the habit of carrying corrosive sublimate put up in gelatine capsules containing 7 grains This will readily dissolve in hot water or the capsule may be opened and the corrosive sublimate added to the water

DR EIY VAN DE WARKER, of Syracuse, N Y, read a paper on

EXTRA-UTERINE PREGNANCY AND ITS TREATMENT BY ELECTRICITY

The following case was reported Mrs X, æt 27 years, was married at the age of 24 In 1885 she had an abortion at three months July 25 she had her last menstruation and August 28 she was taken with severe pain beginning in the pelvis and extending over the abdomen There was slight collapse which disappeared under the use of morphia The next day what was taken for menstruation came on The attacks of pain continued to recur, and on September 17 the decidua was passed On examination a small tumor was detected to the right side of the uterus and slightly posterior to it This was about 3 inches long and 1½ inches in diameter Extra uterine pregnancy was diagnosed Severe paroxysms of pain continued to recur, and on October 6 the electrical treatment was commenced This consisted in the use of the faradic current, a strong induction coil being used The patient was given ten treatments of half an hour's duration, one electrode being pressed against the tumor in the vagina and the other applied externally At the end of this time there was no apparent change in the pelvic mass, and the pain continued On October 20 the treatment was continued one hour, and this was repeated on the following days until three applications were made After the first of these applications the tension of the cyst was found to be less This was regarded as a sign that the fœtus was destroyed, and was believed to be a sign easier of recognition than a diminution in the size of the tumor The paroxysmal pain also

ceased as soon as the tension diminished In using electricity for this purpose the applications should be repeated until the subjective and other evidences of pregnancy disappear In this case the patient recovered completely but it was seven months before all traces of the tumor had disappeared

Dr John C Reeve, of Dayton, O, had reported one case of extra uterine pregnancy cured by electricity Twenty years ago it was pointed out that sudden and violent attacks of pelvic pain attended with gushes of hæmorrhage almost certainly indicated extra uterine pregnancy We have since learned that the expulsion of a deciduous membrane is pathognomic In the diagnosis of this condition the first thing to do is to determine the probable existence of pregnancy An important point in diagnosis is that the tumor in the pelvis manifests signs of activity in its circulation and it grows rapidly

Dr H Marion Sims reported a case under his care four years ago in which treatment by electric shock was resorted to The patient was anæsthetized and twenty or thirty shocks from fifteen freshly charged cells were passed through the fœtal mass Eight or ten applications of this kind were given at intervals of two or three days At the end of this time there was noticed a decided lessening in the tension of the sac The use of electricity was then stopped At the end of one year there was still some thickening of the cellular tissue The patient's health has been perfect since the operation

Dr James B Chadwick, of Boston, referred to a case of extra uterine pregnancy which he treated with the constant current constantly interrupted This was continued three or four weeks before the symptoms ceased Five weeks later the fœtus protruded into the vagina and was removed

Dr. A Martin, of Berlin, had operated on sixteen cases of extra-uterine pregnancy The treatment by electricity has not met with much favor in Germany Tubal pregnancy is the most common form of this accident, and this can be easily diagnosed and easily operated on He had operated on nine cases of tubal pregnancy and all but one have recovered In this case the tube had burst and the abdomen was filled with blood before the operation was done Death resulted from the hæmorrhage The treatment of the other forms of extra uterine pregnancy will depend upon the symptoms and the course In these cases the chief objection is the danger of hæmorrhage from the placenta, but he had experienced no difficulty in dealing with the placenta

Dr Matthew D Mann said the electrical treatment of these cases has advantages over all other methods of treatment The dangers connected with the use of electricity where puncture is not made, are very slight If this method fails we can still perform laparotomy

Dr. Apostoli, of Paris, said that where a case of extra uterine pregnancy has been diagnosed in its earliest stages, the use of electricity should be tried before resorting to any operative procedure The faradic current is not to be depended on He had accidentally used the faradic current on the womb in cases of pregnancy, not knowing that the condition was present, and no abortion has resulted On the other hand, he had accidentally used the galvanic current under these circumstances, and abortion has been induced He recommended the introduction of one electrode into the sac, while the other is applied externally, and in this way if a strong current is used the death of the fœtus is assured at one sitting

Dr Janvrin, of New York, reported a case of extra uterine pregnancy in which galvanism was employed The patient died from bursting of the tube after the third application He had become convinced that the condition of collapse and colicky pain observed in cases of tubal pregnancy is not due to distension of the sac, but to the rupture of small vessels in the peritoneal covering of the tube The treatment of these cases is not galvanism, but as soon as we have made our diagnosis we should, on the first evidence of shock or colicky pains, at once remove the tube by laparotomy and thus give the patient a chance of being a well woman

Dr Van De Warker said that it has been shown that the use of electricity is not dangerous, and if it fails we can resort to laparotomy If Dr Janvrin's view is right we should have hæmatocele, but in his case where there were repeated attacks of pain there was no evidence of hæmorrhage With reference to the recommendation of Dr Apostoli, he thought that the introduction of an electrode into the sac would be as dangerous as laparotomy

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Afternoon Session

Dr Frank P Foster, of New York, read a paper on

Vaginal Injections in Sims' Posture

The value of large vaginal injections of hot water in the treatment of inflammatory conditions of the pelvis is now recognized Even when the rules ordinarily laid down are faithfully carried out it is possible that the efficiency of this measure may be still further increased The main desiderata are the penetration of the water to a position closely contiguous to the seat of the disease, and its application in a quantity sufficient to secure the maximum action of the heat To fulfil these requirements the speaker had used the injections with the patient in the Sims' posture, or rather in a posture somewhat more prone than that of Sims With the woman in the dorsal position the quantity of water in the vagina at one time is decidedly smaller than that which is required to fill the canal when it is distended by atmospheric pressure, as occurs when opening the introitus with the patient in Sims' posture It seems reasonable to suppose that the effect of a large quantity of water in the vagina will be greater than that of a small quantity When the injection is concluded this large quantity of water can be retained for some time The greatest advantage is, however, the gravitation of the abdominal contents towards the diaphragm, thus bringing the hot water in closer relation with the diseased parts With the ordinary appliances there is some objection to this procedure,

but with the vaginal douche described some years ago by the author, no difficulty is experienced

DR CHARLES JEWETT, of Brooklyn read

A NOTE ON THE TREATMENT OF PUERPERAL ECLAMPSIA,

in which he called attention to the value of veratrum viride in this class of cases Its use in convulsive affections has been known for many years, but has not been generally recognized Veratrum viride, if a reliable preparation be employed, is a safe, prompt and efficient remedy in convulsions Its value in eclampsia seems to depend on its effect on the vasomotor tonus Used with proper precautions veratrum viride is perfectly safe A careful search of the literature reveals no death due to its use in the treatment of convulsions It is important that the patient should be kept in the recumbent position while taking the drug The fluid extract of the rhizome is the best preparation Hypodermic injection of the drug is the only reliable way of bringing the circulation promptly under its influence The average dose is 10–20 ♏ The smaller dose repeated in half an hour will usually suffice The guide to the use of the drug is the frequency of the pulse Experience has shown that no convulsion will occur if the system is sufficiently under the influence of the drug to hold the pulse under sixty per minute The average time required to develop the effect of a single dose of the drug is half an hour The average quantity given does not exceed twenty to thirty minims in all Twenty two cases were reported in which this treatment had been employed Of this number six died, three by complication and three from the eclampsia In the fatal cases from twenty-four to thirty convulsions had occurred before the treatment was begun In most cases other remedies, such as chloroform and hydragogues, were employed, in addition to the veratrum viride The most unpleasant effect noticed has been nausea and depression, but these were only transient

OFFICERS FOR THE ENSUING YEAR

President—Dr Robert Battey, of Rome, Ga

Vice Presidents—Dr Jas R Chadwick, of Boston, and Dr A Reeves Jackson, of Chicago

Secretary—Dr Joseph Taber Johnson, of Washington

Treasurer—Dr Matthew D Mann, of Buffalo

Council—Drs Frank P Foster, New York, C D Palmer, Cincinnati, Jas B Hunter, New York, and R Stansbury Sutton, Pittsburg

The following new members were elected Drs Howard A Kelly, Philadelphia, Cornelius Kollock, South Carolina, Bache McE Emmet, New York, and H T Hanks, New York

The report of the committee of conference with reference to the formation of a *Congress of American Physicians and Surgeons*, was received, but the recommendations of the joint committee were *not* adopted

The Society then adjourned to meet in Boston on the Third Tuesday of September, 1888

PHILADELPHIA COUNTY MEDICAL SOCIETY

Special Meeting, September 19, 1887

THE PRESIDENT, J SOLIS-COHEN, M D, IN THE CHAIR

MR LENNOX BROWNE, F R C S, of London, read a paper on

AN UNRECOGNIZED CAUSE OF MANY THROAT AILMENTS

In accepting the very flattering invitation of your President to speak a few words to the members of the Philadelphia County Medical Society, it appeared to me both more becoming and more profitable to offer you some practical remarks explaining the *rationale* of some of the commoner of throat ailments, than to attempt to magnify the office of the laryngoscope by the relation of rare and wonderful cases I was the more inclined to this view because I was well aware that, through the assiduous industry and well-known skill of your President and other members of your Society, you have for some years been kept thoroughly posted in all that is new in laryngology It is now some ten years since first I sought an objective explanation of the condition known as *globus hystericus*, and since I commenced to make a systematic examination with the laryngoscope of every patient who came to me with this symptom The result was communicated in a paper to the Congress of Laryngologists held at Milan in 1880 I found that but very few cases, indeed, are of a hysterical character—that is, of the nature of a phantom sensation—though uterine or ovarian disorder is a not infrequent predisponent, or, at least, concomitant of the throat condition in the female sex

Extending the term *globus hystericus*, I find that, with hardly an exception, all and every other subjective sensation in the throat is symptomatic of an objective cause The chief of such feelings are those of a heat, a prickling, a swelling, a weight, a straw, a hair, or other foreign body A few patients —one especially, a hale farmer—have complained of a feeling of intense cold, which is sometimes relieved, sometimes aggravated, after food taking In some instances there is actual pain with spasm, cramp, and a sensation of choking, and not infrequently there is cough, this symptom varies in degree from a slight hacking, to the loud hyena like bark known as nervous laryngeal cough Many of the cases of the so called laryngeal vertigo, or as I prefer to call it, of laryngeal epileptiform seizures, are capable of explanation and cure, on the lines I am at present taking On examination of the throat of a patient with symptoms such as I have described, one may or may not see chronic congestion and relaxation of the fauces and uvula, enlargement of the tonsils or obstruction by caseated material of the orifices of the crypts, granular pharyngitis, or even laryngeal hyperæmia Where any one of these conditions is present, treatment thereof may or may not give relief, but none of them represents the class to which I would draw your attention, namely, that in which there is no generally recognized morbid state of local significance

The results of laryngoscopic investigations in my hands have shown that there is

1 A varicose, and even truly hæmorrhoidal, condition of the veins at the base of the dorsum of the tongue, sometimes at the under surface and sides, in which last case it may be symptomatic of mitral insufficiency, or of severe hepatic derangement, or even of cerebral lesion There is often a similar varicose state of the vessels in the superior surface of the epiglottis

2 An enlargement of the circumvallate papillæ at the back of the tongue, causing the epiglottis to be hindered in its movements—imprisoned, as your President first called it

Just drawing attention to the fact that the structure of these glands is very similar to that of the tonsils, I may mention that in a few instances I have seen actual blocking of the orifices, similar to the condition known generally as chronic follicular tonsilitis

I may also note that it is not possible to see these things either with a tongue depressor or in the laryngeal mirror as ordinarily employed Many observers, especially beginners, seem to consider that their sole aim is to see the vocal cords, and, if these are sound, they write down, "larynx normal," but they omit to look well to the frame work To see this condition of lingual varix and glandular hypertrophy, the mirror must be placed quite high up in the throat

Where, as is often the case, there is no actual or noticeable enlargement of the thyroid gland, it will be observed, on passing the hand gently over the front of the throat, that there is a distinct fulness of the thyroid isthmus If the least pressure be made at this situation, the patient—not necessarily a female—will complain that the abnormal sensation is at once excited, and, on being questioned, will admit that when it occurs the collar is felt to be too tight for the neck

Inquiring into the general health, and happily failing to find any of the more serious lesions to which I have alluded, it will be noted that habitual constipation and a general defective circulation are both frequent symptoms, while in others there will be concomitant evidences of a varicose diathesis, as rectal hæmorrhoids, varicocele, or varicose veins of the extremities

In females the menstrual flow is often morbidly frequent or excessive, and there are other evidences of an enfeebled vasomotor control Abuse of alcohol and tobacco are excitants of the condition, and in the cases of singers or public speakers, defective methods of filling the lungs—forcing the lower registers upward, or other functional fault which may lead to undue strain on the palato pharyngeal muscles and engorgement of the vessels in this region—are fruitful predisponents

In this connection, I may refer to the accurate explanation offered by your fellow citizen, Dr Carl Seiler, of the etiology and pathology of chronic pharyngitis when occurring to voice users

Some of those obscure cases which come under our occasional notice, of the presence of small quantities of blood in the mouth, or of the taste thereof on rising from sleep, will be explained by the leakage of one or other of these enlarged and hæmorrhoidal venous capillaries in the region now under consideration

A few words as to treatment If the case is not of long standing or of aggravated character, correction of the main constitutional cause—cessation of the faulty method of voice production, or prohibition of a vicious habit or indulgence—may be sufficient to effect a cure, but this is rarely the case Of remedies, I give chalybeates and aperients with digitalis or ergot, as may be indicated Locally, astringent applications, especially of chloride of zinc or perchloride of iron, are by no means without avail, they can be applied by the patient himself Gargles as ordinarily employed are useless, and occasionally are productive of exacerbation of the symptoms Not so if employed by the method known as that of von Troeltsch Of lozenges, I find those of muriate of ammonia much more active in leading to resolution of the venous congestion, than those of red gum, rhatany, etc

Recent investigations show that the astringent properties of tannin have been exaggerated Where the uvula is relaxed, the snipping of an elongated portion, especially if other functional or constitutional faults are corrected, may lead to a cure, but in a certain proportion of patients in which the promises of the specialist as to the good effects to be gained by the procedure are not realized, the cause of failure will be found in non recognition of the various vessels Treatment of these is best effected by the galvano cautery point, and it is necessary to seal each individual enlarged vessel For this purpose it may be necessary to make more than one application Lastly, there is often a hyperæmic tumefaction of the vessels, glandules, and submucous tissues of the pharynx, naso pharynx, and turbinated bodies, these will also be best treated by galvano cautery

In conclusion, I would say, that in case it may be objected that the conditions I have described are but representative of an advanced chronic congestion, I do not deny that such occasionally may be the case In the majority, however, *there are no* such antecedents, and where the two exist, the practitioner will fail to cure his pharyngitis, or what not, until he has recognized and treated the varix

Dr Carl Sieler said I quite agree with the speaker, that the *globus hystericus* is rarely of purely imaginary origin Some chronic inflammation of the upper part of the upper air passages usually accompanies this distressing condition As he truly says, pharyngitis is *one of the most* common causes of this symptom At the same time the pharyngitis is to my mind, as a rule, *the consequence of* remote causes which may be looked for in one of three different directions—in a disturbance of the gastric system, in a disturbance of the respiratory function of the nose and naso pharynx, and, finally, and most commonly in public speakers and singers, in a faulty use of the organ of the voice This latter condition is frequently met with in those who simply

use the voice for ordinary conversation The constant irritation thus produced leads to hyperæmia and chronic inflammation, which extends upward, rather than downward, into the trachea In the treatment of the condition described, I think that little can be accomplished by the application of remedies to the apparent seat of the disease, but that the cause must be looked for and removed

CHICAGO MEDICAL SOCIETY

Stated Meeting, September 5, 1887

THE PRESIDENT, WM T BELFIELD, M D, IN THE CHAIR

DR CHARLES W PURDY read a paper entitled

THE SPECIFIC GRAVITY OF THE URINE, AND ITS RELATIONS TO STRUCTURAL DISEASES OF THE KIDNEYS

(See THE JOURNAL of Sept 10, p 325)

DR J J M ANGEAR I think the point that has been brought out with reference to the apparent and real specific gravity, is of great value, but there is some question in my mind as to the propriety of the use of these terms, going back of that it might be necessary for us to know what the urine is If the urine consists of all the water that passes out of the body, whether it passes through the kidneys and finally through the urethra, or whether it passes out through the skin or into the alimentery canal and then passes out, I can readily see the propriety of the use of the term apparent and real specific gravity, but I doubt if our present knowledge of pathology would enable us to occupy so large a field If the urine is that watery excrement which passes through the kidneys and out through the urethra then I don't see that we can use the term apparent and real specific gravity because the specific gravity of the fluid the patient passes at any time is its real specific gravity The term may be covered better by expressing it as the solid matter contained in the urine, it would perhaps be less objectionable and would not be so likely to lead some of the junior members of the profession astray as the term real and apparent specific gravity I am sorry that the writer did not bring out a little more the nerve influence upon the function of the kidneys I think we may have a nervous condition where the specific gravity may be increased or diminished, we may have albumin in the urine as the result of a nervous condition We have noticed it more particularly perhaps in what is called hysterical patients, and in all cases of nervous excitement I think you will find the specific gravity of the urine diminished in all young people who are first called upon to appear in public, whether it be the child in school reading a composition or declaiming, or the young politician attempting his first speech, or the teacher in a medical college with his lecture, these mental conditions have a decided influence upon the specific gravity of the urine (the apparent specific of Dr Purdy would call it) because there is an increased amount of water, but that water may under other circumstances, as in cases of fever, or great mental excitement, or some nervous disease, pass out through the skin as perspiration, but that very water would pass through the kidneys if that condition did not exist So I think it would be well for us to take into consideration the propriety of the use of these terms and at the same time we must not forget the physiology of the nervous system and the function of the kidney

DR W F COLEMAN There is a question I would like to ask It is somewhat unsatisfactory to take the specific gravity with the urinometer, in fact, I believe the only perfectly accurate way of taking specific gravity is to take it by weight of volume I want to ask if Dr Purdy considers the urinometer sufficiently accurate for all practical purposes? There is a condition of the urine that we find occasionally —it contains a large quantity of fat Does that indicate renal organic disease, or is it likely to induce it? How does it usually affect the specific gravity?

DR H N MOYER said he was greatly interested in Dr Purdy's paper, as it was upon a subject to which he had paid special attention for some time The author lays great stress on the specific gravity of the whole quantity of urine passed during twenty four hours, *i e*, the total solids excreted by the kidneys, as an indication of the greatest diagnostic value, in estimating the degree to which the structural integrity of the kidneys may be involved He thought he had not overstated the importance of the sign, when he regarded it of more consequence than any other symptom of kidney disease A case had come under Dr Moyer's observation suffering from spinal concussion, it appeared to be a simple case and one unusually clear in its symptoms and history The case was to become the subject of a medico legal inquiry, and the urine was examined as a matter of routine It was found to contain one sixth by volume of albumin and gave a slight reaction for hæmoglobin The possibility of beginning Bright's disease, the symptoms of which had been mistaken for spinal concussion, was apparent An examination into the quantity of solids daily excreted showed them to be about normal On this single indication the diagnosis of spinal concussion was affirmed, and the subsequent history of the case confirmed the conclusion A point of practical importance is the difficulty patients have in collecting the urine, and the necessity of measuring it by the physician I have in my office several wide "salt mouth" glass stoppered bottles of a capacity to contain the entire urine for twenty-four hours They are graduated in ounces, (a paper scale attached to the side of the bottle answers every purpose) The patient passes the urine directly into this bottle, and the quantity is noted, a portion of the urine may then be sent to a physician for estimation of the total solids, or further examination

The coefficient mentioned by Dr Purdy, of 2 33 is a good one but it necessitates estimating the quantity of urine in cubic centimeters, and the use of a four-part equation The matter has been simplified by Prof Haines, who recommends as an equivalent the

multiplying the last two figures of a specific gravity expressed in four figures by 1 1 the result to be multiplied by the whole number of ounces to obtain the total solids expressed in grains This formula I have found sufficiently accurate in practice

Dr C W Purdy, in closing the discussion said In reply to Dr Coleman's question about the method of taking the specific gravity, I did not go into that simply because it is thoroughly treated of in several recent works, especially Hoffman and Tyson The most perfect way is undoubtedly by the balance, the actual weight The best apparatus made in this country is made by Squibb If you use a urinometer you will find that they vary very much, they may start off at the standard temperature of 60° F all right, but they seem to go largely by guess after you get up 5 or 10 degrees There is a very fair instrument made with thermometer attachment There is one matter of very great importance if you examine urine freshly passed, as it is usually several degrees higher in temperature than normal Every 7 degrees rise in temperature will require 1 degree to be added to the specific gravity of the urine, consequently you will have about 5 degrees to add to urine of a temperature of 95° degrees which is about the temperature when passed If the kidneys are sound they will throw out water and solids in proportion to the man's weight, if diseased they cannot do it They may do more rapid functional action for a time but they will fall below normal, if the kidneys are essentially diseased the specific gravity must come below the normal There is another point which is very valuable and which surgeons should take notice of It is important to observe the specific gravity of the urine before every surgical operation I think when the specific gravity of the urine is materially below normal it is dangerous to operate in the majority of cases, it may be very dangerous, especially if the urine is deficient in chlorides I did not go into the elements of the urine excreted, dealing with urea, etc , that would make the question very complicated I wished to make it simple and easily understood as it is a question inclined to be overlooked by the majority of observers

Dr Moyer I would like to know if Dr Purdy does not think that the specific gravity can be estimated accurately enough for chemical purposes, by the ordinary urinometer, corrected by the Yale Observatory, if allowance is made for the variation in temperature

Dr Purdy I think it can be

FOREIGN CORRESPONDENCE

LETTER FROM LONDON

[From our own correspondent]

Diphenylamine a Test for Watered Milk—The Red Cross Conference—Hereditary Ichthyosis—The Cause of Morning Sickness in Pregnancy—Amylene Hydrate, the new Hypnotic—Iodide of Potassium Treatment of Consumption—Dr Ferrier

A new and curious test has been discovered by which the smallest addition of water to milk can be detected It is based upon the fact that all well and river waters contain an appreciable amount of nitrates They are either nitrates of soda, of potash, of ammonia or of lime, according to the source from which the water is drawn, and when the liquid is evaporated carefully to dryness, the presence of these nitrates can easily be detected in the residue But there is a means of detecting them without the trouble of evaporating the liquid down to dryness It has lately been found that drinking water containing nitrates yields a blue color when a little sulphate of diphenylamine is added to it This is the new test In order to carry it out a certain quantity of the milk to be examined is placed in a new porcelain capsule, and a few drops of the new reagent added The best way of making the experiment is to place first in the porcelain dish about 20 drops of the sulphate of diphenylamine, and then add the same quantity of milk to it, if the latter contain only 5 per cent of well water of the average quality, a blue line will gradually appear A solution of sulphate of diphenylamine should be placed at the disposal of every householder, with instructions for use printed on the label Armed with this and a common lactoscope, the smallest water adulteration would be easy of detection

At the sitting of the Red Cross Conference which was attended by the Emperor of Brazil, a resolution was adopted requesting the States and Associations which have adhered to the Geneva Convention to carry out the antiseptic treatment of the wounded as soon as they have been removed from the line of battle It was further decided to thank the various Governments and railway companies for the gratuitous transport of provisions for the benefit of the wounded, and to express a wish for the generalization of those facilities

Dr Date has drawn attention to an interesting case of hereditary ichthyosis occurring in a man aged 31, who had the disease well marked on the soles of both feet and the palms of both hands The family history showed that his great grandmother on his father's side was the first member of the family known to be similarly affected Next came her daughters, then the patient's father and uncle The children of the foregoing mostly suffered in the same manner The hands and feet appear natural at birth, the disease appearing about two or three weeks later, in every case being strictly confined to the soles and palms of the hands

Dr Oliver, of the Hospital for Women, considers that the cause of morning sickness during pregnancy may be due to the nerve centre which regulates the process of assimilation being either in apposition or at least in direct communication with that which presides over the organs of generation Considering the close relationship that exists throughout life between the two processes of assimilation and reproduction, there can be no doubt that the representative nerve centres act and react upon each other When, consequently, the uterus becomes the nidus for a developing germinal mass, the molecular disturbances radiated therefrom to the reproductive centre are liable to be transmitted to the pneumo-

gastric as well, and induce either a feeling of nausea or actual emesis Usually, however, in the course of a few months, through habit, the pneumogastric centre becomes tolerant and the symptom evidencing disturbance at the same time disappears Dr Oliver can only suggest that the change from the recumbent to the erect position during sleep renders the whole nervous system more liable to explosive disturbances, as being the reason why the sickness is more especially experienced in the morning

A new hypnotic called amylene hydrate has recently been rather extensively experimented with For a man the dose is 3 to 4 grams to secure a sound, calm, refreshing sleep of six to nine hours' duration The hypnotic action of amylene hydrate is not so energetic as that of chloral hydrate, but stronger than that of paraldehyde But it affects the heart much less than chloral hydrate does, and it is superior to paraldehyde, inasmuch as it can be given in smaller doses, is easier to administer, and does not impart to the patient's exhalations the disagreeable odor that is remarked when paraldehyde is given It is stated that as a hypnotic 1 gram of chloral hydrate is as energetic as 2 grams of amylene hydrate But having less action on the heart, the attention of practitioners will at once be drawn to the new hypnotic Neither does it appear to produce congestion, and not interfering with the action of the bowels, can be administered in diseases of the digestive organs It can also be given as enemata when necessary

Dr Weaver claims to have carried out and gradually improved a successful treatment of pulmonary consumption for a quarter of a century The doctor holds that iodide of potassium produces a condition of blood in which micro-organisms, including the tubercle bacillus, cannot live, but no evidence is adduced in his new "Practical Treatise on the Cure of Pulmonary Consumption" to prove that its presence is incompatible with bacillus life, and if, as he suggests in one part of his book, the function of these microbes may be that of scavengers to get rid of effete and exhausted matters, it is difficult to explain why he attempts interference with such useful parasites

The Balz Medal of the Royal College of Physicians has been awarded to Dr David Ferrier

G O M

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK

(FROM OUR OWN CORRESPONDENT)

Resorcin in Pertussis—Cerebral Irritation in Children—Preputial Dilatation as a Substitute for Circumcision—Ignipuncture of the Tonsils—Dermic Cyst of the Scrotum

The first meeting of the New York County Medical Association after the summer vacation was held the third week in October, when Dr J Lewis Smith, President of the Section of Diseases of Children of the Ninth International Medical Congress, gave a review of some of the more important papers which had been presented to that Section of the Congress These were four in number, one by Moncorvo, of Brazil, one by Jules Simon, of Paris, and two by St Germain, of Paris

The first was on "Pertussis and its Treatment with Resorcin," in which Moncorvo, whom Dr Smith regards as the ablest living authority on whooping cough, gave an interesting account of the microscopical researches which confirmed his belief in the bacterial origin of this disease This being demonstrated to his satisfaction, he selected resorcin as the best available remedy for local application, on account of its antiseptic power, its solubility and its lack of acidity Since 1885 he has been using cocaine as a preliminary to the resorcin, as he found that it lessened the intensity and frequency of the cough before the resorcin had had time to destroy the morbific germs He uses a 10 per cent solution of the cocaine and an 8 per cent solution of the resorcin, and this combination he believes constitutes the best treatment for whooping cough now at our command

The paper by Jules Simon was on "Cerebral Irritation in Infants and Young Children" Although many of these cases are no doubt due to such hereditary influences as alcoholism, insanity and syphilis, a considerable number were, he said, undoubtedly attributable to the deplorable mismanagement of children at the breast so often met with In the treatment of the condition it was necessary that a special and strict hygiene should be enforced, and all sources of excitement carefully eliminated The child should be kept constantly in the air and removed to the country (preferably the sea shore) if possible As to medicinal measures, the bromide of potassium with laxatives as required were all that was necessary, as a rule, the bromide being suspended from time to time for intervals of three days

Dr Smith said that the matter referred to was, in his opinion, one of great importance, and also one which had not as yet received as much attention as it deserved Infants such as were described in the paper were frequently met with in American households, and the symptoms noted were apt to be attributed by the friends to dentition or intestinal worms The causes of the cerebral irritation, however, were now looked for elsewhere by the more intelligent class of physicians, and it was fully recognized that the gum lancet or the use of vermifuges would only do harm There could be no doubt that, in addition to hereditary influences, the treatment the infant received had much to do with this nervous excitability, and that the habits of modern society interfered to no small extent with a well regulated management of the nursery While there are no structural lesions at first in this condition, parents ought to be impressed with the fact that it was liable to result in grave diseases, such as sclerosis or meningitis In such cases, like Simon, he uses both hygienic treatment and the bromide of potassium

The first of St Germain's papers was on "Preputial Dilatation as a Substitute for Circumcision" As the latter was sometimes followed by serious ac

cidents, it was desirable, he thought, that dilatation should be used in its stead in all cases in which this proceeding was practicable An examination of the statistics of the subject showed that dilatation was impracticable in only about one in every 300 cases The dilator he employs is like that of Nélaton, except that it has two blades, instead of three Gradual and slow dilatation of the preputial orifice is practiced, and afterwards daily movement of the prepuce, alternately covering and uncovering the gland

The other paper by St Germain was on "Ignipuncture of the Tonsils," which he believes is destined one day to supersede tonsillotomy It is, he said, a perfectly safe procedure, and therefore much preferable to the latter By the aid of a Smith's gag a thermo cautery is introduced into the mouth and inserted into the tonsil to the depth of 1 centimetre The operation is repeated every eight days, and from two to four sittings are required, at the end of which time the tonsil is found to be almost completely shrivelled up It has proved very successful in St Germain's hands, and although he has employed it now in a large number of cases no bad results have been noted from it

Dr Smith said that he had applied to Dr A D Rockwell, the eminent electro therapeutist, for an expression of opinion in regard to the advantage and practicability of this procedure, and Dr Rockwell had written that, although the author's description of the method was too brief and vague to enable one to judge definitely of its merits, the matter seemed plausible and worthy of attention While the galva no cautery had the advantage over the knife of giving rise to much less danger of hæmorrhage or pyæmia, its application was too painful and required too long a time (six or eight minutes at a sitting), to be successfully resorted to in the case of young children Ignipuncture, on the contrary, could no doubt be employed with facility, because its action was instantaneous

In the discussion which followed Dr Smith's address Dr C A Leale suggested the use of bromide of sodium in the place of bromide of potassium in the cerebral irritation of children, as he had found that the former was much less apt to disagree with the stomach than the latter As to dilatation of the prepuce, this had long been successfully practiced in America, and St Germain's paper therefore contained nothing that was known here

Dr J R McGregor said that in regard to whooping cough he believed that in addition to the primary cause, there was an intense neurosis present, which it was necessary to control in order to deal satisfactorily with the disease Almost every physician had some favorite remedy, and personally he had obtained the best results with oxalate of serium, which he gave in 5 grain doses once a day, in exceptional cases repeating the dose at night He could see no great objection to circumcision, and believed that many of the cases in which diphtheria followed it this was due to carelessness on the part of the operator in regard to instruments, etc

Dr J W S Gouley said that when the preputial orifice was very narrow it was not safe to attempt retraction, on account of the danger of producing paraphimosis, which was always a serious matter in children In such cases there was no question in his mind that, as a rule, excision of the prepuce constituted the last treatment Dilatation, or, more properly, divulsion, was not an easy operation by any means, and the younger the child was the more difficult it was to perform It could be most satisfactorily accomplished by means of Trousseau's tracheotomy dilator, but the procedure was always to be condemned when the prepuce was narrow and indurated

At the close of the discussion Dr Alfred L Carroll read a paper entitled "Mineral Water Miracles," in which he gave a forcible exposition, abounding in lively satire, of the ridiculous claims of some of the mineral waters now in vogue, after which Dr Gouley presented a dermic cyst of the scrotum (the removal of which had also necessitated that of one of the testicles), in which fatty degeneration had been followed by calcareous infiltration, accompanied with the development of a small amount of osseous tissue, the bone cells being found present under the microscope P H P

CYSTOCOLPOCELE COMPLICATING LABOR

Dear Sir —In THE JOURNAL of October 15, page 502, appears the report of a case of labor complicated by cystocolpocele, in which the author says he has found but 37 recorded cases If of value to the profession, allow me to report the following case

On September 24, 1887, I was called to attend a case of labor at full term Labor pains had occurred regularly for the past six hours, though light in character Upon making a vaginal examination, I found a fluctuating tumor about the size of a fœtal head, depending direct from the superior vaginal wall, the tip of the finger could detect the patulous os, but could not reach the presenting part of the child The tumor was not painful, nor had there been marked desire to urinate Patient had passed water several times that day

I suspected a prolapsed bladder, and requested the patient to urinate, and then found that the obstruction had disappeared, with the exception of the shrunken walls, which lay in rugæ on the upper surface of the vagina No other trouble was experienced, and in about two hours she was delivered of a fine pair of twins

This was her fourth accouchement, and in the three preceding ones she had been attended by a midwife, never knew of the prolapse, and had experienced no trouble from it

Respectfully,

A J C SAUNIER, M D

Libertyville, Ill , Oct 20, 1887

GLEDITSCHINE-STENOCARPINE

Dear Sir —The fact, seemingly well proven by the experience of Drs Seward, Claiborne, Knapp, Jackson, Mitchell and others, that the newly discovered alkaloid, gleditschine stenocarpine, is largely

like cocaine in its power as a local anæsthetic, has prompted me to determine whether it has a value akin to that drug, as a stimulant in the treatment of opium habitués, and I am now experimenting in this direction, using a 2 per cent solution exclusively by subcutaneous injection That cocaine, hypodermically, is a valued aid in treating the opium neurosis is beyond question, in my opinion, but it is not a specific, and should never be used for this purpose by the patient himself, be he physician or layman Should gleditschine have a similar value, it may be found free from the ensnaring danger of cocaine, though, assuming its stimulant power, this freedom from risk will not be likely, and we shall note, probably, in the not far future, baneful effects from its abuse, and gleditschine inebriety be added to the list of toxic neuroses

It has been stated by Dr Seward that he "has observed antidotal effects to gleditschine from morphia," and Mitchell (W H) asserts "it is a direct antagonist of morphine and opium, 10 drops of the 2 per cent solution neutralizing 1 grain of morphine or 6 of opium " Experiments on rabbits now being made by myself will, it is to be hoped, sustain these claims "

The 2 per cent solution can be obtained of Messrs Lehn and Fink, New York City, at a present wholesale cost of $6 an ounce I shall be pleased to receive and report the experience which any reader of THE JOURNAL may have on this subject Yours very truly, J B MATTISON

314 State St , Brooklyn, October 15, 1887

BOOK REVIEWS.

THE PHYSICIAN'S VISITING LIST (Lindsay & Blakiston's), Thirty seventh year 1851–1888, with many improvements Philadelphia P Blakiston, Son & Co

This visiting list is so well known that no description is needed Of the various visiting lists it is one of the lightest, strongest, least cumbersome, and most convenient

SURGERY, ITS THEORY AND PRACTICE By WILLIAM JOHNSON WALSHAM, F R C S , Assistant Surgeon to St Bartholomew's Hospital, Surgeon to the Metropolitan Free Hospital, London, etc With 236 illustrations 8vo , pp ix–655 Philadelphia P Blakiston, Son & Co 1887 Chicago W T Keener

While in no sense a "short cut to surgery" Mr Walsham's book seems to be in the main intended as a manual or handbook for the student and practitioner of surgery The subjects with which every student ought to be thoroughly acquainted are given special prominence, while the rarer forms of injury and disease have either received but short notice or have been entirely omitted The details of operative surgery and minor surgery and bandaging, with such other things as the student is supposed to be taught practically in the wards, are but briefly discussed

The first two sections, occupying 119 pages, are devoted to "General Pathology of Surgical Diseases," and "General Pathology of Injuries," for the introduction of which into a manual the author is to be commended The illustrations, as a rule, are good, in that they show what they are intended to represent Many of them are new, and we note with pleasure the conspicuous paucity of many too familiar old ones The book is a good one, and written in Mr Walsham's well known lucid style

MISCELLANEOUS.

COMMEMORATIVE MEDAL, NINTH INTERNATIONAL MEDICAL CONGRESS —We learn that a contract has been made with a first class medalist connected with the United States Mint at Philadelphia, to engrave and stamp the commemorative medal for the subscribing members of the Ninth International Medical Congress The work is to be executed in the best possible manner As several months will be required to prepare the dies, members of the Congress who have not subscribed, we presume can still do so on application to Dr J M Toner, 615 Louisiana Ave , Washington, D C , who has the matter in charge

TYPHOID FEVER IN CINCINNATI —Telegraphic dispatches from Cincinnati state there are more than 500 cases of typhoid fever in the City, and that the outbreak of the disease is thought to be due to the condition of the Ohio river, which is much lower than it has been for many years

FLORENCE NIGHTINGALE, the famous heroine of the Crimea, is reported dying at her home in London, from the effects of her perilous labors during the days in which she devoted her life to the care of soldiers wounded in battle

DR JAMES A GRAY, one of the editors of the *Atlantic Medical and Surgical Journal*, died on October 7, aged 37 years

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM OCTOBER 15, 1887, TO OCTOBER 21, 1887

Major W D Wolverton, Surgeon, detailed as member of Army Retiring Board at Washington, D C , convened by S O 78, A G O , April 5, 1887, vice Major C C Byrne, Surgeon, hereby relieved S O 241, A G O , October 15, 1887

Capt Edwin F Gardner, Asst Surgeon, relieved from duty at Ft Reno, Ind Ter , and ordered for duty at Ft Lewis, Col S O 241, A G O , October 15, 1887

Capt Jno J Cochran, Asst Surgeon, now on duty at the Presidio of San Francisco, Cal , is assigned to temporary duty at hdqrs Div of the Pacific, as assistant to the Medical Director of that division S O 244, A G O , October 19, 1887

First Lieut C B Ewing, Asst Surgeon, granted leave of absence for one month, on surgeon's certificate of disability S O 112, Dept Mo , October 18, 1887

Nathan S Jarvis, to be Asst Surgeon, U S Army, with the rank of First Lieut , October 14, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING OCTOBER 22, 1887

P A Surgeon H G Beyer, ordered to hold himself in readiness for orders to the "Trenton "

Asst Surgeon S S White, ordered to hold himself in readiness for orders to the "Trenton "

P A Surgeon F B Stephenson, detached from the "Bache," and ordered to the Navy Yard, Boston

Asst Surgeon E P Stone, detached from the "New Hampshire," and ordered to the 'Bache "

Surgeon T H Street, detached from the "Patterson" and placed on waiting orders

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ORIGINAL ARTICLES.

INJURIES OF THE ABDOMEN AND THEIR PROPER TREATMENT

Read in the Section on Surgery, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY N B CARSON, M D,

OF ST LOUIS, MO SURGEON TO THE MULLANPHY HOSPITAL, ETC

Sir Spencer Wells has said "abdominal surgery, though not without just claims to the credit of having done good service to humanity, must still be looked upon as a branch of our science and art which, still important, calls for continued search for truth, and for constant efforts to improve methods of practice from every surgical stand point"

To no branch of abdominal surgery does this statement apply with greater truth than to that pertaining to abdominal wounds No branch of this subject is receiving larger attention to day than is this, and in no other is there greater necessity, for in no department of the subject is there so much uncertainty The subject is being discussed at the meetings of surgical societies and in journals all over the world, and yet, notwithstanding all that has been said, there is still much to be learned, for the subject is only in its infancy, and although operative procedure in these cases meets with much opposition, it will nevertheless, and at no distant day, take its place with ovariotomy as an acknowledged operation

I do not expect in this paper to add anything new, or to make any suggestions which have not been already offered, but simply to give my experience and add my name to the list of those who have already spoken in favor of operating in these cases, instead of treating them as Dr Martin, of Herde, justly remarks by "opium euthanasia"

As to wounds of the abdominal walls, little need be said, as the various text books treat them so fully as to require no more than a passing notice on my part From personal experience I am in doubt as to the possibility of a force being applied to the abdominal wall with sufficient violence to produce an inflammation of the peritoneum, *per se*, without rupturing some of the viscera

If, however, peritonitis should follow such an injury, I would, upon the first indication of inflammation, open the abdomen and keep it thoroughly drained The success attending this plan of treatment in cases of peritonitis from other causes, I think, fully justifies the procedure

"The effect of contusions of the abdomen is not always limited to the walls, but extends sometimes to the whole visceral mass, but more commonly to the large solid and fixed viscera—the liver, spleen, and kidneys—and less frequently to the hollow viscera, the stomach, intestines and gall bladder Probably all of the organs contained in the abdomen, even the blood-vessels, may be torn or ruptured without the existence of external wounds" Otis reports Where the solid organs and blood-vessels are wounded by blows or falls on the abdominal walls without penetration, the injury is generally so great as to give the surgeon little chance for rendering aid, the patient rarely recovering from the shock Hæmorrhage is necessarily great and post mortems usually show the cavity filled with blood If, however, the patient should survive the shock and the symptoms indicate surgical interference, I would open the abdomen, and if a bleeding vessel were found, would ligate it, or if the liver were ruptured would control the bleeding either with the thermocautery, or a solution of sub sulphate of iron, or pack it with aseptic gauze, bringing the free end out through the abdominal opening In case the spleen or either kidney were the organ involved, I would remove them This operation has been done with sufficient success for other causes than injury, to teach us its possibilities

As to the pancreas, Senn has said all that can be said in regard to wounds of that organ, and I will not refer to it hereafter in the consideration of the subject

Up to the present time there has not been a successful case recorded where laparotomy has been done for the relief of intestinal rupture without penetration The nearest approach to success was the case of J Croft, of St Thomas's Hospital, who opened the abdomen of a man, who had been injured twenty four hours before by his companions jumping upon him and rupturing the bowel Laparotomy was done shortly afterwards and the bowel fastened to the external opening The patient survived the first operation, but as he did not gain flesh, and on account of discharges irritating the skin in the neighborhood of the opening, Mr Croft attempted to close this by resecting and bringing together the divided ends A month had elapsed since the first operation, but on account of sufficient nourishment not being taken up by the system, the

patient could not withstand the shock of the second operation and died within a few hours

The uncertainty of diagnosis in these cases is the reason operation is delayed until it is made certain by the advent of peritonitis, and thus many valuable lives are sacrificed, as the following cases that have come under my own observation in the last few months will show

The first case was that of a hostler who had been kicked in the abdomen, two days before he was brought to the St Louis Mullanphy Hospital, where I saw him a few hours after his admission He was moribund and an operation was out of the question The post-mortem showed the ileum ruptured low down, the peritoneum inflamed, the result of fæcal extravasation The patient, I feel sure, could have been relieved by an operation, as might also have been the following case—in which I assisted Dr Gregory—had the operation been done earlier The patient had fallen about four feet and struck the abdomen across the top round of a ladder There was considerable shock after the fall, with much pain which steadily increased instead of diminishing His condition went on from bad to worse until the following Tuesday at noon—three days after the injury—when the abdomen was opened, only as a forlorn hope A small rent in the intestine was discovered which was closed by the Lembert suture, and the cavity thoroughly cleansed, the abdominal opening closed, and the patient returned to bed, little if any worse for the operation, but he died six hours later

The symptoms in many of these cases are obscure, and when to operate will always be a question, while in others, as in the following, they are so clear that there cannot be any doubt In this case the patient was brought to the hospital where I saw him shortly after He was then collapsed—skin bathed in a cold perspiration, pulse low, vomiting everything taken into the stomach, abdomen much distended, liver dulness diminished, bladder empty, thirst intense Rupture of the bowel was diagnosed and laparotomy advised in case patient recovered from the shock, which he did not do Post-mortem showed ileum ruptured about its middle entirely across Neither the abdominal wall or peritoneum were injured, while the omentum immediately under the site of the injury was bruised, and in places contained extravasated blood

If called to see a case of non-perforating injury of the abdomen, if the symptoms indicated in any way an injury of the viscera, I would advise immediate operation, and unless I did so, would consider I had not done my duty, as we shall see from tables later on, that exploratory laparotomy is far less fatal than the expectant plan of treatment heretofore adopted in these cases

As the table of Sir W MacCormac is more complete than the one I had compiled, I will refer to it In these tables twelve cases are recorded, all of which were fatal

The same author has collected sixteen cases of laparotomy for intra peritoneal rupture of the urinary bladder of which six were successful, and ten failed These results are certainly encouraging, especially as these cases have been almost universally fatal before the *bold* and *daring* surgeon of the day undertook to save them Renigald Harrison—"International Ency of Surgery," Vol vi p 329—says "Where the rupture has extended into the peritoneal cavity, I cannot find any evidence to warrant the belief that life has ever been saved without the intervention of surgery In the few cases where recovery has taken place, it has been directly traceable to the aid which nature has received from the surgeon's hand"

The fatality of penetrating abdominal wounds is so generally recognized, that I almost feel like apologizing for referring to it It has been said that Mr Abernethy used quaintly to remark that "nature would have nothing to do with these cases, but stood by and shook her head, and left the patient to his hopeless fate" While nature stood appalled by the task before her, man, more daring and venturesome, was not willing to stand by and see his fellow man die without an effort to save him, and fortunately for mankind the introduction of antiseptics into surgery has enabled him to accomplish wonders, and the day is rapidly approaching, if not already here, when the man with a wound penetrating his belly has some chance of being saved

That the peritoneum may be penetrated with a certain degree of impunity without any very grave consequences, may readily be proved by a reference to the records of our hospitals, (provided the viscera are not injured), and by the few fatal results following exploratory laparotomy, which to-day is a recognized operation Still it is not a pleasant thing to open the abdomen, even if it is by enlarging an already existing wound, to find there was no cause for so doing

The question then arises What are the symptoms which should induce us to advise the operation? Certainly not simply because a body passed through the cavity, for there are many cases on record where different things have passed entirely through the belly without injuring, in the least, any of its contents The following case is in point, and as I believe it has never been reported will mention it An old miser, an inmate of the St Louis Mullanphy Hospital, having concluded he was of no use in this world, determined to get out of it He had in his possession an old dress sword, such as were worn in the good old times gone by, which he concluded to use in carrying out his purpose To make the killing sure, he entered into negotiations with a scissors grinder to have it sharpened But the grinder would not take less than fifteen cents, and the miser would not pay such an extravagant price, the bargain was not closed, and as a consequence the man did not get rid of himself The weapon was too dull to cut and passed entirely through the cavity without injury to its contents From this it will be seen that the question as to the viscera being wounded, is not always a matter of certainty, and the propriety of the operation becomes a question

The following interesting case was related to me by a gentleman in the country, for whose integrity I

LAPAROTOMY FOR GUNSHOT WOUNDS OF ABDOMEN

Operator and Reference	Age and Sex	Operation	Time of Operation after Injury	Condition at Time of Operation	Organs Involved	Result	Remarks
W W Seymore N Y Med Jour 1886, xliv 209	16 Male	Lapar, resection of colon suture of small intestine	13 hours	Fair	Colon small intestine and mesentery	Died	
R Abbe Med News, Nov 6 1886	53 Male.	Lapar, suture intestine and bladder	6 hours	Fair	Small intestine, bladder & mesentery	Died	
D V Dean Records St Louis City Hospital unpublished	16 Male	Lapar suture of intestine cleansing of abdominal cavity	Not given	Very bad	Small intestine	Died	
F J Lutz St Louis Cour Med, Sept., 86	21 Male	Lapar and suture of wounded viscera	10 hours	Good	Small intestine and mesentery	Died	
J B Hamilton Journal Am Med Assn, Aug 22, 1885	19 Male	Lapar and suture of wounds	2 hours	Good	Colon small intestine omentum	Recovered	
F S Dennis Medical News, xlii 10 1886	23 Male	Lapar, cleansing of abdominal cavity	Not given	Very bad	Liver and vessels of liver	Died	
Same Med News xlii, 26 10 1886	Male	Lapar suture of intestine	Not given	Fair	Small intestine and iliac vein	Died	
W T Bull N Y Med Jour, Feb 14 1885	22 Male	Lapar suture of small intestine	17 hours	Not given	Small intestine.	Recovered	
Same Med News Nov 6 1886	25 Male	Lapar, suture of wounded viscera	2 hours	Good	Small intestine meso colon	Recovered	
Same Med News Nov 6, 1886	24. Male.	Lapar, suture of wounded viscera	6 hours	Very bad	Trans colon and small intestine	Died	
H H Mudd, not reported	17 Male	Lapar, suture of stomach	3 days	Good	Liver and stomach	Died	Wound in stomach had entirely closed extravasation of blood in meso colon about 4 inches in breadth, slight peritonitis
N B Carson St. Louis Courier of Medicine, March, 1887	25 Male	Lapar suture of wounded viscera and resec of 2½ inches of intestine	6 hours	Good	Small intestine and mesentery	Died	Operation unsatisfactory on account of inability to cleanse peritoneal cavity Post mortem not allowed
Kocher British Medical Jour July 1884	14. Male	Lapar suture of wound in stomach	3 hours	Collapsed	Stomach	Recovered	
R. A Kinloch N C Med Jour 1882 x 1	Age not given Male	Lapar, suture of wounds	11 hours	Fair	Small intestine and mesentery	Died	
Same Trans Am Surg Ass reported in Am Med Assn Journal June 4 1887	27 Male	Lapar suture of wounds	2 hours	Fair	Small intestine and mesentery	Died	Post mortem showed cavity containing some fluid abscess in mesentery
David Prince not reported	30 Male	Lapar suture of wound in bowel	1 hour	Good	Ascending colon	Recovered	Attempt was made to enter abdomen by median line, but old adhesions preventing the region of ball entrance was chosen patient was seen recently doing full work Operation perf'd June 25, 1886
J Loyd British Medical Jour 1883 1 500	19 Female.	Lapar and formation of artificial anus	3 days	Bad	Small intestine	Died	Post m showed mesentery perforat'd and injury of bladder not made out at time of operation
W W Keen, Medical News May 14 1887	18 Female	Lapar suture of wounded viscera and nephrectomy	9 hours	Fair	Liver, stomach intest. sup mes vein and kidney	Died	Survived 15 days died of peritonitis due to gangrene of bowel at site of one of the perforations
C. Kollock Med News April 15 1887	15 Male	Lapar and suture of wounded intestines	7 hours	Fair	Des g colon and small intestine	Recovered	
W T Bull Med News Nov 6 1886	57 Male	Laparotomy	8 hours	Very bad	Liver	Died	Died on the table
M Freyer Deutsche med Wochenschrift July 15 1886	19 Male	Abdominal wound enlarged and int. resected outside of cavity	6 hours	Collapse	Small intestine.	Recovered	
C K Briddon Annals of Surgery 1887	Age not given Female	Lapar suture of wounded viscera	12 hours	Fair	Stomach and omentum.	Died	
E Andrews Weekly Med Rec Chicago 1884 x 441	Age not given Male	Laparotomy	15 hours	Good	Abdominal wall	Recovered	
F W Parham N O Med and Surg Jour, 1886-7 N S xiv 508	34 Male	Lapar, suture of wounded viscera	2 hours	Shock	Small intestine ascending colon and bladder	Died	

LAPAROTOMY FOR GUN-SHOT WOUNDS—CONTINUED

Operator and Reference	Age and Sex	Operation	Time of Operation after Injury	Condition at Time of Operation	Organs Involved	Result.	REMARKS.
F W Parham, N O Med and Surg Jour, 1886–7, N S xiv, 508	22 Male	Lapar, suture of intest and ligation of artery	3 hours	Shock	Small intest & ext iliac artery	Died	
J McF Gaston, Med and Surg Reporter, Phila, June 12, 1886, p 739	30 Male	Lapar and cleansing of abdominal cavity	4 days	Very bad, owing to diffuse peritonitis	Abdominal wall	Died	
T G Richardson, N O Med & Surg Reporter 1885, No 6, N S xiii, p 867	Age not given Male	Lapar, suture of intestine,	9 hours	Shock	Small intestine, ascending colon and mesentery	Died	
C A Jersey, Med Rec, Oct 16, 1886	44 Male	Lapar, suture of intestine	20 hours	Good,	Small intestine and mesentery	Died	
M Pickett, Med Press, West N Y, Buffalo, 1886, 5, 6 1, 247	13 Male	Lapar, exploratory	Not given	Good	Abdominal wall	Recovered	
T Annandale, London Lancet, April 25, 1885	15 Male	Lapar and suture of wounded viscera	1 hour	Good	Small and large intest, rectum, and mesentery	Died	
Sebastapoble, reported by M Tralo in Trans Méd de Paris, Jan 15, 1887	Not given	Lapar, suture of intestine	Not given	Not given	Small intestine	Recovered	
W T Smart, Brit Med Journal, 1885, 1, 379	Age not given Male	Laparotomy	Not given	Shock	Liver	Recovered	Ball extracted from liver
A V Parks, Chicago Medical Jour & Ex, 1885, li, 412	16 Male	Lapar and suture of intestine	22 hours	Fair	Small intestine	Died	
C B Nancrede, Phila Med Times, 1886–7, xvii, 7, 158	Not given	Lapar, suture of wounded viscera	Not given	Fair	Stomach & duodenum	Died	
Vaudens, Plaies d'Arms a Feu, 1836	Not given	Enlargem't of wound of entrance and resection of intestine	Not given	Not given	Small intestine	Died	Post mortem showed wound of cæcum with fæcal extravasation
Same, Gunther, Operationslehre, Abtheilung iv	Not given	Abd'l wound enlarged and intestine sutured	Not given	Not given	Large intestine	Recovered	
T Billroth, Prof Billroth's Klinik, 1886 (R von Hacker, reporter)	63 Female	Lapar, resection of ribs, excision of contused part of stomach and suture of wounds	32 hours	Very bad	Stomach, liver and aorta, and right kidney	Died	
A O MacKellar, Dec 26, 1886 (unpublished) Noticed in Lancet, '87, 1, 37	22 Male	Lapar, perforation secured by ligatures	33 hours	Collapse	Sigmoid flexure and bruising of small intestine	Died	
T G Morton, Phila, unpublished	36 Male	Lapar, and suture of wounded viscera	1½ hours	Good	Stomach, transverse colon and omentum	Died	
Newell, New Brunswick, Brit Med Jour, Feb 25, 1882, 260	Age not given Male	Lapar, gun wad and pieces of clothing removed from abd'l cavity	1 day	Not given	Small intestine	Recovered	
Pirogoff, Langenbeck's Archiv, xxvii, 278	Age not given Male	Lapar, resection of intestine and mesentery	Not given	Not given	Small intestine	Result doubtful	Progressed favorably for 4 days, then lost sight of
Pozzi, Revue de Chirurgie, 1887, 178	13 Male	Lapar, partial resection of gut	8 hours	Bad	Small intestine and bladder	Died	
A C L Ramsey, North west Lancet, 1885 iv, 1887	7 Male	Lapar, excision of gut	6 hours	Bad	Duodenum, contusion of colon	Died	

will vouch A woman had the abdomen divided entirely across There was no doctor in the neighborhood, and the relator's father-in law, a prominent man of the country, and whose advise was sought on all occasions, was sent for Realizing the necessity of doing something he invaginated the cut ends of the gut, returned it into the abdomen, and closed the external wound with an ordinary needle and flax thread (home made) As the relator expressed it, he got the right ends of the bowel into each other, and the patient recovered, living several years, to die of another trouble, not connected in any way with this injury From this case, if true, the possibilities of abdominal surgery can be seen

LAPAROTOMY FOR STAB WOUNDS

Operator and Reference	Age and Sex.	Operation	Time of Operation after Injury	Condition at Time of Operation.	Organs Involved	Result.	Remarks
T S Dennis Medical News, Feb 27, 1887	22 Male	Wound enlarged and intestine sutured outside and returned		Good	Small intestine	Recovered	
Same same	57 Male	Laparotomy and cleansing of cavity	3 hours.	Bad	Abdominal wall	Recovered	
Same, same.	25 Male	Laparotomy and suture of intestine	24 hours	Fair	Small intestine	Died	The intestine was perforated through the scrotum
Same, same	22 Male	Laparotomy and suture of intestine.		Fair	Small intestine	Died	
N B Carson St. Louis Courier of Med, xvii No 3 1887 p 226	40 Female	Laparotomy and suture of wounded liver	36 hours	Good	Liver and gall bladder	Died	Cause of death iodoform poisoning morning of 5th day Post mort. showed peritoneal cavity very nearly normal
G B Thornton Miss. Valley Monthly	Age not given Male	Laparotomy with resection of intestine	25 days	Bad	Small intestine	Died	Post mortem showed undiscovered wound in bowel
Wunderlich N Y Med Jour, 1887 i 68	19 Male	Laparotomy and suture of wound in stomach			Stomach and diaphragm	Died	
I Grindon St. Louis Cour of Medicine	30 Female	Excision of intest. and enlargement of abdominal wound	1 hour	Good	Small intestine	Recovered	
W G Tremaine Medical News 1886 xlix, p 601	18 Male.	Laparotomy and cleansing of abdominal cavity	10 hours	Bad	Abdominal wall.	Died	Abdominal wound had been sutured by physic'n who saw the case and who had also administered 8 grs opium during the short time patient was under his care from the effects of which he is supposed to have died, and not as result of last operation
J Avery Med 1885 i 11 412	Age not given Male	Laparotomy and suture of intestine	7 hours	Much shock	Small intestine and mesentery	Recovered	
E A. J Barker London Lancet 1886 i 347	14 Female	Abdominal wound enlarged & abd cleansed	1½ hours	Good	Abdominal wall	Recovered	
F J Lutz St Louis City Hosp Records not published	42 Male	Laparotomy and cleansing of abdominal cavity		Good	Abdominal wall	Recovered	
Tuholski St. Louis City Hospital Records not reported	21 Male	Laparotomy and cleansing of abdominal cavity		Good	Abdominal wall	Recovered	
D V Dean St Louis City Hospital not reported	32 Male	Laparotomy and cleansing of abdominal cavity		Bad	Abdominal wall	Died	Abdominal cavity contained much decomposed blood and serum Peritonitis
Same same	30 Male	Laparotomy and cleansing of abdominal cavity		Good	Abdominal wall	Recovered	
A. C Dalton same.		Laparotomy and cleansing of abdominal cavity			Abdominal wall		
Baudens Annals of Surgery 1886 p 392	Not given	Enlargement of existing wound			Small intestine.	Died	Post mortem showed undiscovered wound in rectum
G Tiling St. Petersburg med Wochenschrift 1848 No 24	19 Male.	Laparotomy and suture of wounds of stomach and intestine		Fair	Stomach intest and omentum	Recovered	
J G Brooks Medical Herald 1886 vol viii p 134	11 Male	Laparotomy and ligation of vessels	A few hours	Great shock	Abdominal wall and mesentery	Recovered	
Kwiecinski, Przegl lek Krakau 1885 xxiv 71	20 Male	Laparotomy and suture of wounds in intestines	1 hour	Fair	Small intestine	Recovered	
W O Roberts Kentucky Am. Practice 1884 xxix 13.	54 Male	Suture of wounds in intestine & mesentery enlargement of abd'l wound		Good	Small intestine and mesentery	Recovered	
J B Roberts Phila. Polyc., 1886 iii 93	19 Male	Laparotomy and suture of wound in bowel.	2 hours	Very bad	Small intestine	Died	Post m showed one wound in bowel overlooked
J B Deaver unpublished	Adult.	Excision of spleen		Great shock	Spleen	Died	Post mortem showed wound of kidney etc
Jobert, Günther Operationslehre.	23 Male	Enlargement of abdominal wound and suture of bowel			Small intestine	Died	

LAPAROTOMY FOR STAB-WOUNDS—CONTINUED

Operator and Reference	Age and Sex	Operation	Time of Operation after Injury	Condition at Time of Operation	Organs Involved	Result.	Remarks
T G Morton, unpublished	30 Male	Laparotomy, suture of omentum, ligature of bleeding omental artery	9 hours	Increasing pain about wound, emphysema, no shock	Wound of omentum	Recovered	
J B Roberts, unpublished	40 Male	Laparotomy, wounds all closed with Lembert's suture	45 minutes	Violent abd pain, free hæmorrhage	Small intestine, colon and mes	Recovered	
Davids, Günther, Operationslehre, Abtheilung IV, 163	Not given	Enlargement of abd'l wound, gut sutured			Small intestine	Recovered	Gored by ox Subsequently ventral hernia form'd in scar
Gal, Centralblatt f Chirurg, 1886, 686	45 Male	Enlarging abd'l wound	9 hours	Good	Abdominal wall	Recovered	Gored by a cow

The following interesting case occurred in my practice and is of especial interest, on account of its involving the medico-legal point, as to the propriety of operating in cases where the lives of two persons are involved instead of one As a matter of opinion, I think the interest of the second party should not be considered, as by his own act he forfeits all rights in that direction

I first saw this case—a woman about 40 years of age—thirty-two or three hours after she had been stabbed by her husband She was then somewhat under the influence of morphine Her condition, however, was good, the only indication of serious trouble was an occasional intermission of the pulse, which, however, was of good volume, etc The abdomen was painful on pressure and somewhat distended From the history of the case I learned that the patient had been accustomed to taking stimulants rather freely—that at the time of the injury there had been considerable shock, from which she had readily recovered I found upon examination, a knife wound three fourths of an inch in length, entering the cavity about an inch and a half below the margin of the ribs, and two inches to the right of the medium line It was supposed the knife had entered the transverse colon Laparotomy was advised and assented to by both herself and children As the surroundings were very unfavorable, I had her removed to the hospital, not very far distant, where, thirty-six hours after the receipt of the injury, I opened the abdomen, and instead of an intestine, I found the liver had been penetrated, and the further progress of the knife stopped by a stone which entirely filled the gall-bladder

The toilette of the peritoneum was carefully made and a drainage tube introduced at the lower angle of the wound Everything went on well until the evening of the third day when symptoms of iodoform poisoning set in, and she died on the morning of the fifth day The post-mortem examination showed the peritoneal cavity as nearly normal as possible, under the circumstances The left ventricle and arch of the aorta contained old well organized blood-clots The liver was perfectly healthy in appearance The post-mortem was not completed as the coroner did not think it necessary

I am at a loss to account for the bile that was found, as the stone certainly filled the gall bladder, and at the point of perforation was firmly adhered to the mucous membrane, nor were the bile ducts enlarged to indicate an engorgment of the liver I think, had the iodoform not been used the patient would have recovered

From all sources I have collected twenty eight cases wherein the abdomen has been opened for penetrating wounds Of these sixteen recovered, eleven died, and one, undecided, died on the third day Of this number eight involved the abdomen only, with five recovered, two deaths and one undecided Of the deaths one was evidently due to opium poisoning, of which the patient had been given 8 grains in a short time by the physician who saw him first In the other case peritonitis had already set in, and the patient was in a bad condition at the time of operation Of the remaining nineteen cases all had wounds involving one or more of the viscera Of this number ten recovered and nine died, a showing very decidedly in favor of laparotomy, as it is evident from the nature of the wounds and the parts involved, many, if not all, would have died had nature been left to care for them

The great mortality attending gun shot wounds can never be overcome, but I believe these cases need not remain as they have been in the past—beyond hope

Hunter McGuire places the mortality in this injury at more than nine out of ten The records of cases as far as I have been able to examine them verify this estimate I have not found a case of gun-shot wound involving the small intestines wherein death did not result When the stomach is the organ involved the patient has more chance of recovery, but such chances are so very few as compared with the unfortunate ones as hardly to be worth considering

In every case of gun-shot wounds of the intestines, says Park, where there was extravasation of the intestinal contents, death was the result, unless the

cavity was cleansed, and the opening of the abdomen is the only means we have to accomplish that end But how are we to decide when to open the abdomen, as the symptoms are not always plain in these cases, as the following that have come under my personal observation demonstrated

In the first case I saw—three hours after the injury—there were then no symptoms that would enable us to say that the abdomen had been penetrated As there was no shock, the pulse was regular and full—the abdomen nearly normal, and except the hole of entrance, showed nothing to indicate any serious injury underneath His expression was good and he complained of little or no pain (there had been no shock) As the surroundings were bad I had him removed a distance of three miles to the hospital Upon his arrival there, two hours later, his condition had changed little if at all A careful examination showed occasional loss of a beat in the pulse—a symptom I have almost invariably found when any of the important abdominal viscera are wounded—otherwise it was very good—voice strong, expression good, abdominal percussion showed slight increase in the resonance, except to the right of the umbilicus over a space about as broad as the hand where it was dull—almost flat The abdomen was opened six hours after the receipt of the injury, and the intestines found to have been perforated eight times—once at the mesenteric border Two and a half inches of the bowel had to be resected in one place on account of the laceration of the parts In the remaining perforations the edges were pared and the opening closed with Lembert sutures The cleansing of the cavity was not satisfactory on account of a portion of the intestine being adherent to the lower part of the abdomen, its great depth and the rigidity of the abdominal muscles The patient survived the operation three days, dying of septic peritonitis No post mortem was allowed

Another case, one which I saw in consultation with Dr Mudd, was one also which presented few symptoms to indicate that the abdomen had been entered and important viscera wounded

A young man, 17 years of age, accidently shot himself with a small target rifle, just above the umbilicus When I saw him with Dr Mudd, three days after the accident, there were really no bad symptoms, unless it was that the pulse, every little while, lost a beat The abdomen was tender but very little distended Laparotomy was advised and consented to by the father, who is one of our leading physicians

The reasons for advising the operation were the belief that the ball had penetrated some of the viscera, and that there were missing pieces of clothing, and also a beginning peritonitis

Upon opening into the cavity a wound in the liver was found, as was also the wound of entrance of the ball into the stomach, but not that of exit There were no evidences of extravasation The stomach wound had healed The trans colon was much distended, and showed symptoms of beginning inflammation, as did also the peritoneum generally

In this case the operation probably did harm instead of good, for I believe had the operation been left undone the patient's chances for recovery would have been better, although I have doubts as to the result being different

As to there being any symptoms or rules to guide us in our selection of cases for operation, I do not believe they exist in any definite form, and each case has to be decided upon its own merits I do, however, firmly believe that the day is not far distant when the great majority of these cases will reach the surgeon much sooner after the receipt of the injury, than they now do, and that a fair per cent of recoveries will be the result

From all sources I have collected forty four cases of gun shot wounds, for the relief of which laparotomy was done, with thirteen recoveries, thirty deaths and one doubtful This is certainly a favorable showing as compared with the let alone plan

Finally, I will refer to the excellent paper of F S Dennis and to his conclusions, as containing sound principles which should guide us in the selection of cases for operations

I wish to acknowledge my indebtedness to the tables of Sir W MacCormac for several cases not reported elsewhere

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LAPAROTOMY AS A CURE FOR TUBERCULOSIS OF THE PERITONEUM

Read before the Section of Obstetrics and Gynecology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

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The subject of this paper is well illustrated by the detail of the following case

Mrs C , æt 28 years, 4 years married, the mother of one child 1 year old, of medium size, light blonde, sought my advice for swelling of the abdomen, which she supposed to be a tumor She had noticed a gradually advancing enlargement for about two months On examination fluctuation was marked but diffuse, extending in an evident wave over the abdomen with the patient upon her back In this position the abdomen was flat and bulging on either flank, with protrusion of the umbilicus In this position, also, the area of percussion dulness corresponded to the extent of lateral fulness, while the umbilical region was clear, down nearly to the hypogastrium On changing her position to the side, the upper flank became clear on percussion, while the region of dulness was transferred to the lower side on a line nearly to the level of the umbilicus On reversing the position the regions of dulness and clearness changed sides The examination of the pelvic organs gave negative evidence The uterus approximated the normal in size and position, the organ was freely movable, and was not affected by abdominal manipulation except by the percussion wave, which could be felt in the vaginal cul de sacs The region of the liver was free from tenderness and

gave a normal outline on percussion The temperature was normal, the appetite fair, there was no cough, while the lungs offered no suspicion of disease She complained of indigestion and a tendency to looseness of the bowels with flatulency The urine was stated by the patient to be normal in amount The specific gravity was 1019, acid and free from albumen The patient was slightly falling off in flesh There was no œdema of the feet or eyelids

There was but one diagnosis to be made—that of ascites, but there was no evident cause of the peritoneal effusion She was placed upon tonics and diuretics and sent home She was seen at intervals of two or three months There was no change other than in a slow increase of the ascites and in the loss of weight In the early spring she had a troublesome cough which lasted five or six weeks, but abated by the use of simple remedies

Nothing further was seen of the patient until late in the fall of the same year A complete change was then observed in the condition of the abdomen The outline had lost the character of free fluid effusion, the flatness and bulging of the flanks had disappeared and the abdomen become prominent and rounded The area of percussion dulness had changed from the central region to the loins By deep palpation in the right iliac space an irregular hardened mass could be detected, and an induration of apparently the same size and character near the right hypochondriac region The wave of fluctuation was limited by the line of dulness at the epigastrium and at the flanks The uterus seemed free from any connection with the abdominal masses and was in a fairly normal position The umbilicus was yet protuberant

I was in great doubt as to the state of affairs The was no cough or hectic, the temperature was about normal, she had wasted considerably, the face was pinched and the expression such as seen with ovarian cystoma, not like that observed in malignant disease of the pelvic or abdominal organs The urine free from albumen The feet were slightly œdematous I abandoned the former diagnosis, but without offering a positive substitute, advised further delay

In March, 1886, respiration being difficult from pressure, and the abdomen painful, she was admitted to the Central New York Hospital for Women for the purpose of aspirating the abdominal fluid She was anxious for an operation, as she believed that she had a tumor, but I could not divest my mind of my first impression, and refused to operate in any other way than by aspiration We succeeded in removing only about a quart of straw-colored fluid, which did not materially reduce her size The fluid coagulated by boiling but not by standing, and the rather firm coagulum broke up into flocculent masses by excess of acetic acid It was not examined microscopically, which is to be regretted, as I believe important facts may be had by such an examination of the fluid in these cases

On June 10, 1886, she was again admitted to have her theory of the case acted upon, as I consented to operate I must confess that I had been gradually coming over to her view of the case, and now believed that the former ascites was masked by the subsequent development of an ovarian cyst I invited in Dr H D Didama to see her He gave her a careful examination, and while not positive, favored the operation of an ovarian cyst, and advised an exploratory incision

The next day I operated in the presence of Drs Didama, Totman, and the House Surgeon, Dr Adams I made an incision about 5 inches long, fully expecting to come upon a cyst, but on reaching the peritoneum no separation could be made between it and what what ought to correspond to a cyst wall, and yet what we regard as peritoneum was enormously thick I carefully worked my way through it and was rewarded by a jet of fluid from what appeared to be a cyst cavity The incision was enlarged to the full extent of the external wound, the patient turned upon her side and the cavity emptied Some further attempts were made to separate a cyst wall from the peritoneum, but it only resulted in tearing the peritoneum from the abdominal wall The idea of a cyst was abandoned and we confined our efforts to find out the nature of the case By inserting the hand a mass was brought into view which was so thickened and matted together that it was with difficulty recognized as intestine The peritoneum was rolled out and found to be studded with a great number of tubercles, from the size of a millet seed to that of a buck shot, some of them white, others yellow The intestines were everywhere beset with them The transverse colon, thickened and covered with tubercles, was adherent to the peritoneum from side to side, thus enclosing the cavity and giving to the fluid the appearance of being confined within the walls of the cyst

This ended the operation The cavity was carefully sponged out with warm corrosive sublimate solution (1–5,000), and the wound brought together, dressed with iodoform and dry absorbent cotton

The temperature never exceeded 100° and she made an exceedingly quick recovery Before the sutures were removed there was a great change in her appearance, her demand for food greatly increased, color returned to her cheeks, and before she left the hospital in three weeks had gained about ten pounds of flesh She went on gaining, and in three months was a strong, robust woman, and at this time, June, 1887, remains so None of the iodoform entered the abdominal cavity

If this were an exceptional case it would possess no merit worthy of record, but in the light of recent knowledge it must be regarded of value as a matter of accumulated experience Other cases of tuberculosis of the peritoneum and of the abdominal viscera appeared to undergo a remarkable amendment or apparent cure directly after the performance of laparotomy This has been observed sufficiently often to regard it as a possible sequence Why there is an arrest of progressive tuberculization after laparotomy it is difficult to say We know too little about the tubercular forces to begin with to predicate upon it any well defined explanation, in the

next place, there is total lack of precision in the method We may say that there is no operator of laparotomy for tuberculosis known to day, we simply know that it has happened in a discursive way, as a result of errors of diagnosis, as Hegar says Concerning laparotomy itself there is some confusion

At the first meeting of the German Gynæcological Society last summer the subject came up in an irregular way in the discussion of a paper by Elischer on the use of iodoform in severe laparotomies Dr Frommel had used the drug in two cases of tubercular peritonitis and in another case of ovarian tumor with ascites, with small papillæ all over the peritoneum Hirschberg had cured peritonitis with tubercular nodules by corrosive sublimate, hence iodoform was not necessary Dr Meinert agreed with the last speaker as far as iodoform was concerned, and threw doubt upon the sublimate, as a like result may be obtained by incision and tapping Dr Olshausen had seen it cured by incision, and threw doubt upon all that had been said before, by stating what we all know, that it may seem to get well of itself or remain stationary for years Dr Saenger gave curative value to laparotomy Dr Battlehuer had seen the same result follow tapping, finally, Dr Frommel, who had introduced this subject into the discussion, disclaimed that he had recommended iodoform as a specific for these cases

The credit of collecting the large mass of material relating to genital tuberculosis in general and to this phase of the subject in particular, belongs to Hegar [1] He reports two cases which were either cured or rendered stationary by laparotomy, another case of apparent arrest in which nothing special was done, and a laparotomy in a fourth case too recent to give results

Spencer Wells has had a like experience Koenig [3] reports a seeming cure, to the date of the report, using iodoform in the toilet of the peritoneum Neumann [4] had two cases Hegar [5] throws doubt upon the diagnosis of one of these cases, in which the woman remained well after an interval of eight years Potenmentions a case operated upon by Hartwig, of Hanover This subject seems to be, from the description, identical with my own A small portion of the peritoneum was excised and the diagnosis verified by examination Numerous miliary, granular and larger growths beset the membrane, which had lost its normal appearance Under the microscope a variety ranging from granular nodules to giant cell formation with cheesy masses were observed Bacilli were found located in the giant cell masses Ulceration was nowhere observed This case was characterized by slightly elevated evening temperature, but the tubercular process was not detected in any other organ One year after the operation the patient was well, with a great gain in flesh [6] Lindfors records a case of apparent cure In this instance there was no mistake in diagnosis, but a cyst was present, complicated by tuberculosis of the internal genitalia and peritoneum, the removal of which appeared too difficult to attempt This part of the operation was abandoned The abdominal incision seemed to render the tuberculosis stationary The case was not characterized by either amenorrhœa or high temperature [7]

Upon this brief history of laparotomy in its relation to tuberculosis of the peritoneum we may base a reasonable hope that in selected cases the operation may prove a bar to the progress of the disease, or if this is a too hopeful view of the matter, then for a period at least to afford the patient a fair degree of health and comfort It still further enlarges the field for exploratory laparotomy, and if the secret history of the operation could be written it would doubtless furnish a numerous array of cases in which similar results had, to the surprise of the operator, been reached It is safe to assume that opening the abdomen in instances of tubercular degeneration of its lining membrane is comparatively free from danger, and in view of its possible benefit amply justified Advanced tuberculosis of the internal genitalia and of the peritoneum has about it an appearance of malignancy that would forbid the operation were it not for the hope that the tubercular process might be rendered stationary, as a fatal result frequently follows exploratory incision in sarcoma or papilloma

In what way laparotomy tends to localize the tubercular process or render it stationary, or probably cure it, we are not in a position to say We may, however, in an oblique way throw some light upon the method In the form of tuberculosis to which we have particular reference there is a modified and peculiar form of inflammation, characterized by serous and plastic exudates, which opening the peritoneal sac may have a tendency to arrest, as a series of experiments in the surgical treatment of peritonitis now being made by various surgeons prove [8] The ascitic accumulation may, and probably does, prove an additional source of irritation, as we have already seen, in the debate before the German Gynæcological Society, that aspiration or tapping equally with laparotomy has been known to result in apparent cure Distension by the accumulation, aside from the irritating quality of its constituents, may act in a twofold way to intensify the morbid process mechanically by pressure, or as affording a medium for the distribution of the tubercular germs Bacilli may be found in the fluid, just as giant and polynucleated cells may be seen in the ascites of sarcoma "It is probable that these liberated cells graft themselves on the peritoneum and pass through the diaphragm into the pleura They behave just as we have seen bacteria do " [9] The explanation may exist in thorough evacuation of the fluid If this be true we see why tapping, equally with other methods, acts as a cure, and if true, drainage through a large opening and a thorough toilet of the cavity must be the better way We may trace the process a few steps

[1] Die Entstehung Diagnose u chirurgische Behandlung d Genital tuberkulose des Weibes Stuttgart 1886
[2] Diagnosis and Surgical Treatment of Abdominal Tumors Lond 1885 p 210
[3] Centralblatt fur Chirurgie 1884 No 44
[4] Centralblatt für Gynäkologie, 1886
[5] Die Entstehung etc p 7
[6] Centralblatt für Gynäkologie 1887 No 3 p 33
[7] Centralblatt fur Gynäkologie, No 10 1886
[8] M Heitler Pittsburg Med Rev 11 36
[9] Hart and Barbour Manual of Gynecology, p 212

further The irritated peritoneum is given rest and allows of a process that belongs *per se* to tuberculosis, namely the thickening and induration of the surface—an encapsulation—and which Hegar[10] suggests may be a stage in spontaneous cure

The tubercular nodules do not always break down, but may form hard calcareous masses which remain in this condition indefinitely Such masses have been found in the peritoneal covering of the tubes [11] Both these processes, encapsulation and calcification, most probably are favored by the spontaneous absorption of the ascites which has been already noticed, or by its evacuation

One further reference to the natural history of tuberculosis need detain us but a moment When local it has been observed to undergo, without treatment either general or special, a so called spontaneous cure,[12] or in other words has become dormant, and may so remain for years Rokitansky, quoted by Hegar,[13] says this is very rare If tuberculosis was proved to exist in other parts such instances of unalterable localization are not known in literature Spontaneous so called cures are more common in men in whom the disease does not so readily extend to the peritoneum, but is more disposed to remain localized at the site of the initial lesion in the genitals than in women, as in the latter there is open communication between the peritoneum and the genitals, a region that in both sexes shows a marked tendency to initial infection, whence its easy transmission to the peritoneum, pleura and lungs as I have already shown When the newly formed products are in a condition of encapsulation, calcification, or caseous metamorphoses with absorption of effusion, the stand still ends as a rule by the eruption of the disease in other organs with fatal results, or by an intensified removal of the outbreak in the peritoneum As an element to give uncertainty to the effect of surgical treatment when followed by arrest of local symptoms of the disease in women, spontaneous cure may be considered of very doubtful value

It will be interesting to review briefly the form of tuberculosis of the peritoneum in which laparotomy may be expected to give the best results Kaulich,[14] in an elaborate study of the disease when confined to the peritoneum, divides it into three groups The first we may call the acute form, which advances by a series of attacks with pyrexia with intervening lulls, until the entire abdomen has been attacked, without effusion but with retraction of the abdominal walls There is no record of surgical treatment of this group, nor would it naturally fall under the observation of the laparotomist The second group is defined by an insidious invasion, slow and even advance without pyrexia, and with ascites as a leading and early trait, and unless we find evidences of consolidation at the apices of the lungs, which is often wanting, exceedingly difficult of diagnosis Our case belongs to this second group, and it is here that surgical treatment will offer its best results In this class also we get the apparent spontaneous cure, for Kaulich's third group is composed of the second which affords the phenomenon of decrease of effusion with general improvement, but only for a longer or shorter time If cases belonging to this second group can be brought under treatment before the secondary lung invasion, and the disease thus attacked midway in its advance from the genitalia to the respiratory organs we have an ideally typical case for laparotomy

We may go with surgical treatment much further than the second group as defined by my typical case Nodular masses may develop on the tubes and consolidate within the folds of the broad ligaments into fixed and irregular tumors, or the tubes may form elongated, round, uneven masses, but without the even circumscribed swelling of pyosalpinx Another form of tube infection is when broad ligaments, ovaries and tubes are consolidated into one mass in connection with a wide extension of miliary peritonitis Here Hegar, except in cases in which other and vital organs are involved, would advise salpingotomy and castration The uterus must be dealt with separately per vaginam with the curett, or caustics and iodoform, although Hegar treated one extra peritoneally The treatment by laporotomy offers some special difficulties that would not be met with in pyosalpinx The extirpation of the tubes is difficult owing to vascular and close adhesions and the arrest of hæmorrhage uncertain The tubes are involved in the posterior fold of the broad ligament and Hegar cautions against breaking through to reach them as it would probably result in irrepressible hæmorrhage Of course such extensive breaking down of vascular adhesions implies drainage in the after treatment It is doubtful if in such cases salpingotomy will meet with general favor Hegar's results are none too favorable to warrant such severe measures in search of a problematical cure He had one direct death, the third case developed secondary lung infection, the fourth and fifth cases also It will be a revival of all the hot discussions over total uterine extirpation in epithelioma with the same complication of after history

Briefly in conclusion, an analysis of my own case with a view to diagnosis will prove useful Let us consider the first symptoms that induced the patient to seek medical advice—the ascites Reasoning by exclusion the range of inquiry is not a wide one The face being free from œdema the kidneys are, as a rule excluded As a matter of fact they were healthy The heart exhibited no error, nor would the ascites point to any heart lesion The accumulation belongs properly to disease of the liver, as the lower extremities are free from œdema, the complexion, the evacuations, and the freedom of the hepatic space from pain, tenderness or enlargement prove that this organ is not the source of the effusion Examining the pelvis we observe the uterus to be in approximately a normal position and mobility, the vaginal vault free from tenderness, nodes or tumors, and on external palpation we find this true of the pelvic spaces generally We have thus eliminated

[10] Loc cit, p 7
[11] Kiwisch Die Krankheiten d weiblichen Sexualorgane, third ed, p 231
[12] Geil, Ueber Tuberkulose d weib Genitalien
[13] Loc cit, p 8
[14] Klinische Beiträge zur Lehre von der periton Tuberkulose, Prag Viertelj, II 36

benign cysts or tumors, sarcoma and other malignant diseases of the pelvis and abdomen as a source of the effusion Speaking with a due regard for the anomalism of disease we have only peritonitis left to explain the phenomenon, but the absence of febrile antecedents shows that it can be no ordinary form while the freedom of the lungs from any indication of tubercles simply renders uncertain what with this indication would be a fairly clear case Nothing is added to this history for months except occasional abdominal pain due to meteorism and pulmonary irritation which was self-limited, and a gradual wasting of the body Then on examination a state of affairs presents which can reasonably characterize but one thing The free ascites had become encysted In the whole range of pelvic and abdominal disease under the conditions named I know of none that will offer this peculiar anomaly except tubercle of the peritoneum This disease has one leading trait aside from fluid effusion and that is plastic exudation, hence the former must be followed after a certain interval by the latter with the result of widely encapsulating the effused fluid

Our case further demonstrates that miliary tuberculosis of the peritoneum may antedate the development of tubercular nodes and tumors upon the ovaries and tubes It may be that this is the rule and that the latter do not develop upon the pelvic organs except as the result of the evolutions from the stage of effusion to that of the adhesive exudate, and these masses being mainly the result of thickening and adhesions in mass this seems probable From the attention that the disease will attract, being now but another excuse for laparotomy, points like these will be cleared up

And lastly, as a positive aid to diagnosis we have the bacilli of tubercle It may be difficult to find these in the ascitic fluid Hegar found the bacillus but in the tubercle itself It would be reasonable to suppose, however, that a careful search would demonstrate its presence in the fluid

DISCUSSION

DR CHARLES T PARKES, of Chicago The paper just read by Dr Van de Warker is an admirable one Admirable in the description of the case related and upon which it is based, replete with pathological considerations of the subject discussed, complete in its collection of authorities, and just and reasonable in the deductions presented It is hardly possible that any of us have much experience from which to draw any conclusions for the cases of tuberculous peritonitis that have been subjected to this treatment are rare, so that the procedure so far as results go, is still on trial Some cases reported certainly seem to establish the supposition that laparotomy has been of more benefit in these cases than simple aspiration How this effect is brought about by the laparotomy does not seem clear One experience has happened to me, in which the exploratory incision in a doubtful case, led to the patient's recovery The patient had been sick many months and came under my care with a large mass in the abdomen which had many of the signs of an ovarian cyst She was reduced to an extreme condition of debility The incision showed the peritoneum much thickened and the abdomen free from a cyst, but filled with coagulated lymph There were no adhesions between folds of the intestines or between them and the abdominal walls It was removed in large masses by means of the hand and the cavity thoroughly cleaned A large drainage tube was left in the lower angle of the wound The patient passed on to complete recovery without any drawbacks Here was a case in which no matter how erudite the touch, how clear sighted the inspection or how exclusive the deductions, no proper realization of the patient's condition could possibly have been reached without abdominal section

The second case was one the exact fac simile of the case related by the author of the paper After many months' illness with a gradually increasing ascites the patient came under my care Careful examination failed to detect any cause for the ascites in the abnormal condition of any of the organs of the chest or abdomen Aspiration was done and when the fluid was withdrawn several irregular masses could be felt in the abdomen It was then concluded that the case was one of tuberculous peritonitis The abdomen refilled rapidly after the aspiration so that in one week it contained as much fluid as ever It was determined to do an abdominal section and establish permanent drainage When the abdomen was opened the peritoneum was found universally covered with nodules of small size The omentum was matted together in one mass of miliary tubercles, the internal genitalia were also covered with the same growths After emptying the cavity thoroughly and carrying a large drainage tube to the bottom of the cul de sac of Douglas, the wound was closed This was done two days ago and the patient seems not to have suffered any more from this procedure than from the aspiration The pain of distension is entirely relieved and there has been a very free flow of fluid from the drainage tube I feel better about this case since hearing the paper

Several cases of abdominal disease have come under my inspection in which in spite of every care in treatment and the most earnest attempts of good men to reach a clear diagnosis, the cases have gone on suffering for months and years and finally an abdominal section has shown a disease which could be removed and the patient cured One cannot say that because a patient has tuberculous peritonitis a laparotomy should be done with the belief that a cure will result Still I am convinced that the section promises more prolonged relief for the patient than can be expected from aspiration I am heartily in accord with the deductions of the paper

DR E P MURDOCK, of Chicago I was very much pleased with this paper and especially with the histories given by Dr Parkes, but I must say that the opposition side may as well be given, inasmuch as I call to mind two cases which came under my observation that did not terminate so well The first case presented a history similar to the last recited by Dr Parkes and was almost identical with the case cited in the paper, in which there was a slow accumulation

of ascitic fluid until the abdomen became much distended Finally she came under the care of a very prominent professor in this city who under a mistaken diagnosis performed laparotomy, emptying the cavity completely The patient recovered from the operation but the abdomen filled again just as bad as before Subsequently she came under my care and I drew off the ascitic fluid eight or ten times but it continued to refill She was tapped fourteen times She died within the last fourteen months and it was found to be a case of tuberculosis The laparotomy was of no benefit whatever

The other case first came under the care of Dr Hall, of this city, and I was called to see her afterwards She had been in the hospital at one time and presented a history of tuberculosis After having seen the effects of these other operations we decided not to perform laparotomy The abdominal cavity was aspirated repeatedly, upon the theory given in the paper that perhaps some relief might be given by aspiration, but the abdominal cavity continued to fill, after which tuberculosis developed in the lungs and the patient died

From these two cases it seems, while laparotomy may give relief, where the disease cannot be removed, if tuberculosis exist and the tubercles cannot be taken away, I cannot see how we can hope for a cure of the cases by simple laparotomy Of course we can relieve the distension, but we can do the same by aspiration There may be some cases where an effusion of peritonitis is partially absorbed and some remaining in the abdominal cavity is cleaned away, where undoubtedly the disease is removed and the laparotomy proves a success because the patient is cured, but if there be tubercles remaining in the omentum or mesenteries I cannot see how there can be any benefit derived from laparotomy

DR E W CUSHING, of Boston I have a case to report which is of interest in this connection as it was an undoubted case of tuberculosis and underwent laparotomy The woman came to me complaining of vomiting She was sent to me to have the matters vomited examined I examined her and found a retroversion of the uterus I treated her awhile after that, supporting the uterus with tampons, but she got no better, was always vomiting, nothing would stay on her stomach Finally she was admitted to the hospital Her temperature was about 99½°, sometimes more sometimes less At first the uterus was movable but afterwards it was fixed, and there was a hardness in the region of the tubes and in the roof of the pelvis, her condition was getting desperate There was no trouble in the lungs, and it seemed probable that it was a case of salpingitis Laporotomy was made and upon opening the pelvis it was found to be filled with fluid which was clear and straw colored The whole perineum was completely studded with little granules On examining the ovaries and tubes it was found that they were in a mass of adhesions apparently of a tuberculous material A diagnosis was made of tuberculosis peritonitis The wound was closed after thoroughly washing out the cavity with a bichloride solution She recovered and the vomiting ceased Six months afterwards she came to the hospital complaining that one of the stitches in the abdomen was discharging It was found that the lower part of the abdomen was filled with a mass which came up to the abdominal opening half way between the pubes and the navel Some little treatment was made and she went back to Ireland The operation was last December and we got a letter from her the other day saying that she was entirely well She has not entirely filled up with the fluid since, but the disease is there and will some day kill her I think before we take the risk of removing ovaries and tubes that are clearly tubercular it is well to wait for the history of those cases that have been operated upon

I have two other cases which bear on the fact of the fluid not coming back after laparotomy One is interesting because of the difficulty of diagnosis The lady was supposed to have catarrh of the stomach, there was a gradual filling up and great difficulty in breathing Dr J saw her and said it might be an ovarian cyst, tubercular peritonitis or chronic laryngitis When they sent for me she was so she could not lie down and we concluded it was best to make a laparotomy The abdomen was opened and a large amount of fluid drawn off We found cancerous masses deep down, around the omentum and the ovaries The wound was closed and permanent drainage established, but nothing ever came through the drainage tube The lady lived five months and never had any return of peritoneal fluid

Another similar case that Dr Marcy and I operated on was *in extremis* from the tremendous extension of the abdomen, she must have weighed 300 pounds We lifted her on the table handling her as we would an iron safe The fluid was removed and permanent drainage established It was found that there was a cancerous trouble She was relieved and gradually died from the natural progress of the disease

I think that in these cases it is good surgery to open the abdomen, I do not believe in tapping or puncturing I believe thoroughly in opening the abdomen and seeing what there is to deal with I think it is premature for us to follow Hégar's example of trying to take out the ovaries and uterus until we see how these cases come out

DR A S V MANSFELDE, of Ashland, Nebraska I wish to make a short statement The author of the paper is correct in doubting the efficacy of iodoform or corrosive sublimate in tuberculosis of the perineum I may add that it is only within the last two weeks that experiments have been made positively proving the absolute uselessness of iodoform in tubercles whether of the joints or perineum It will not harm the germs, they will grow where the iodoform is A mixture of tubercle with iodoform put into the chamber of the eye will more quickly develop tuberculosis than the tubercle itself My authority is the late experiments in the laboratory of Berlin I think I can offer an explanation why laparotomy will cure tuberculosis of a peritoneal nature You are aware of the fact that in chronic hyperæmia of the lungs caused by some disease of the heart it is very seldom if ever found to be tuberculous It is

also a clinical fact that wherever a vesical cavity is cured, outside of a few cases of calcareous degeneration, the greater number of cases are cured by fibroid thickening of the surroundings of the tubercle cavity, thus stopping the progress Now is it not a fact that when you make a laparotomy you remove the very cause of the tuberculosis You cause by this operation the same condition of things which nature has produced in cases of chronic progressive heart disease, hyperæmia and consequent strangulation of the existing growth on the surface of the perineum, and rapid change for the better

THE FUNCTION OF THE OBLIQUE MUSCLES IN CERTAIN CASES OF ASTIGMATISM

Read in the Section on Ophthalmology and Otology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY G C SAVAGE, M D,

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So much has been said and written about astigmatism that it would seem that nothing more of a practical nature could be added

Before proceeding to the study of the function of the oblique muscles in certain forms of astigmatism, I would briefly review what has long been known The rule, with many exceptions, is that astigmatism is due to the radius of curvature of the vertical meridian of the cornea being shorter than the radius of curvature of the horizontal meridian The exceptions are that the meridian of greatest curvature may be horizontal or may be at any degree between the vertical and the horizontal The meridian of least curvature is always at right angles to the meridian of greatest curvature In hypermetropic astigmatism, whether simple or compound, the best meridian is usually vertical or within 45° of the vertical, in myopic astigmatism, as a rule, the best meridian is horizontal or within 45° of the horizontal In the one instance horizontal lines or those nearly horizontal are best seen, while in the other, vertical or nearly vertical lines are most distinct It is well known that, other things being equal, astigmatism is least troublesome to a patient if the best meridian is vertical, as in hypermetropic astigmatism, or horizontal, as in myopic astigmatism In all other cases the nearer the best meridian is to the vertical or to the horizontal, the more favorable it is to the patient's comfort

More than two years ago my observation of hypermetropic astigmatics led me to the conclusion that there is less discomfort to patients, if the best meridian of one eye is on one side of the vertical, *e g*, at 100°, and the best meridian of the opposite eye is on the other side of *the vertical e g*, at 80°, than if both were on the same side of the vertical A similar study of myopic astigmatism respecting the relative positions of the best meridians and the horizontal, led me to a like conclusion I was not long in surmising that the oblique muscles must have something to do in cases of astigmatism where the best meridian is neither at 90° nor 180° What this function is I now no longer surmise, having observed it often It is to so rotate the eye on its antero posterior diameter as to bring its best meridian *to the vertical* or to the horizontal The oblique muscles, at best weak, soon become fatigued, and if not allowed to rest must become the source of great discomfort For some time I was in doubt as to how they acted It is now clear that the superior oblique of one eye must act with the inferior oblique of the other, the one muscle *under the control* of the fourth nerve, the other under the control of a branch of the third nerve, otherwise double vision would result, as I am able to show by means of these diagrams The rotation of one eye towards, and of the other from, the median line, keeps corresponding parts of the retinæ in the same relative position, hence the images of external objects fall on parts of the two retinæ that act together

Let us study why it is that the condition is more favorable if the best meridian of one eye is at 100°, and the best in the other at 80°, than if these meridians were, in both eyes, at 100° or 80° If the best meridian of right eye be at 100° and *that of left eye* at 80°, the right superior oblique will roll the globe 10°, thus bringing the best meridian to the vertical, the most favorable position, the left inferior oblique will roll its eye out 10°, thus placing its best meridian at an angle of 70°, not so favorable to sharp sight as its natural position The better image in *the right eye is the one the* brain takes cognizance of for the time Soon the labor is shifted, in time too short to be computed, from the right superior and left inferior oblique to the left superior and right inferior oblique muscles, when the best meridian of the left eye is brought to the vertical, and the best meridian of right eye is turned to an angle of 110° Now the sharper image is on left retina, and is the one the brain takes cognizance of until the labor is again shifted This state of activity on the part of the oblique muscles alternates with the state of rest, and, consequently, the fatigue is less than if a state of tonic contraction had been kept up

If the best meridian of the two eyes be at 100°, the superior oblique of the right eye and the inferior oblique of the left eye will roll their respective eyes so that, at the same moment, the best meridian of each eye is vertical Other things being equal, an equally sharp image is formed in the two eyes A state of tonic contraction on the part of these muscles is necessary so long as anything approaching accurate vision is maintained This is necessarily attended by much fatigue and in many cases by suffering

If the best meridians are near the horizontal in the two eyes, the one at 170° in the right and the other at 10° in the left eye, then the oblique muscles will so act as to place first the best meridian of one eye and then the best *meridian of* the other horizontally, etc, as I have shown in the conditions where the object of the rotation was to get the best meridians in the vertical position

This habit of rotation is formed in early life, and, unless the condition on which it depends is cor

rected, is continued throughout life, the symptoms caused by this rotation have, therefore, a duration commensurate with one's existence Not so with those symptoms caused by what is ordinarily known as eye-strain, for at the age of 60 years, a little earlier or a little later, the ciliary muscle has lost all its power, therefore the symptoms due to the exercise of this power have vanished, the loss of this ciliary power being gradual, the symptoms disappear by occurring at longer intervals and being less severe

As I have demonstrated to you, the action of the oblique muscles in giving to certain astigmatics a condition of things favorable to sharper sight, is harmonious but not symmetrical, the superior oblique of one eye acting with the inferior oblique of the other, just as the internal rectus of one eye may act harmoniously with the external rectus of the other, *e g*, with my face fronting the end of this room, if I look to the right the external rectus of my right eye acts with the internal rectus of my left eye in directing the visual axes toward the object at which I may be looking The action is harmonious but not symmetrical

If I fix my vision on this page before me my visual axes are directed towards it by the symmetrical and harmonious action of the two internal recti muscles In like manner the action of the oblique muscles is, under certain conditions, symmetrical and harmonious, as was long ago pointed out by physiologists The superior and inferior recti approach the eyeball obliquely and are so attached When they contract they not only cause the eye to revolve on its horizontal diameter, but they also cause a slight revolution to take place on the antero-posterior axis If the vision be directed upwards the superior recti, acting harmoniously as they always do, not only make the visual axes point up but, on account of the obliquity of their attachments, they would rotate, if unopposed, the two eyes on their antero posterior axes so as to make the upper end of the vertical meridian of each eye turn towards the nose, and thus would produce double vision This action is opposed by the two inferior oblique muscles, which are thrown into a state of harmonious and symmetrical contraction, each keeping the vertical meridian of its own eye in its normal position, thus preventing double vision I may say here that the branches of the third nerve supplying the superior rectus and the inferior oblique muscles deserve if any nerve does, the name "patheticus," which in no sense belongs to the fourth nerve

When the gaze is directed downwards the inferior recti would not only turn the eyes in that direction but, if unopposed, would also so rotate the eyes on their antero-posterior axes as to turn the lower end of their vertical meridians towards the nose In this condition the superior oblique are the muscles that oppose and by their opposition keep the vertical meridians parallel In speaking above of the harmonious and symmetrical action of the oblique muscles I have had in mind an emmetropic eye Physiology very properly lays stress on this kind of action on the part of these muscles and, with a single exception, it is the only function ascribed to them by physiologists The exception is this If the head be turned to one side, the eyes being emmetropic, the oblique muscles will act harmoniously but not symmetrically in so revolving the eyes as to compel the vertical meridian still to remain vertical notwithstanding the inclination of the head, *e g*, supposing my own eyes to be emmetropic this teaching would lead me to believe that, if I were to incline my head 15° towards the right, the right superior oblique and left inferior oblique muscles would each so act on its own eye as to revolve it through an arc of 15° to bring the naturally vertical meridians back to the vertical position, a thing not necessary, nor do I believe it ever occurs I am certain it does not occur in astigmatic eyes made emmetropic by means of a proper cylinder Suppose, as is nearly true in my own case, that a man has simple hypermetropic astigmatism, the perfect meridian being at 90° He has been given the proper convex cylinder with its axis, of course, at 90° To all intents and purposes his eyes are now emmetropic Let him incline his head 15° Should his oblique muscles now rotate his eyes 15° his vision would be made worse, in the same manner as revolving his glasses through an arc of 15° Since this does not occur, as I personally know, for I can see as sharply with my head inclined as when it is erect, I conclude that harmonious non symmetrical action of the oblique muscles has no existence in emmetropic eyes, whether naturally so or made so by means of proper correcting glasses

I feel that I can say without fear of successful contradiction that the real and only harmonious non-symmetrical action of the oblique muscles of the eye is that, already pointed out by me in this paper, for rendering sharper the acuteness of vision in certain forms of astigmatism

The most beautiful part of this theory is that it has a practical side For two years it has been of incalculable benefit to me, enabling me, in many instances, to do successfully work that had been a failure in the hands of others One remarkable case is, at this moment, in my mind About 10 years ago a lady, then about 25 years old, consulted a reputable ophthalmic surgeon for symptoms which she had been led to attribute to her eyes He found one eye useless from an old central choroiditis, but the fundus of the other eye was perfectly healthy The good eye, however, had compound hypermetropic astigmatism with the best meridian of the cornea, as he determined it, at 180° He justly attributed her symptoms to this defect and prescribed a spherocylindrical lens for its correction, placing the axis of the cylinder at 180° For months this lady persevered in the use of her spectacles, obtaining no relief At last, in despair, she laid them aside About 8 years later she was encouraged by some of her friends for whom I had done some refracting work to consult me I examined the glass given her by the surgeon referred to above, determined its strength and the location of the axis of the cylindrical part Under homatropia I made a most careful examination After the exercise of much patience and perseverance, I determined that the best meridian was at an angle of 165° and not at 180° I

prescribed for her, as I now remember, the same glass that had been given her before, placing its axis, however, at 165° After a few days of adaptation, she became comfortable and has remained so ever since, a period of almost two years The error made by the former surgeon can be accounted for in no other way than that the superior oblique (it was her left eye) had rotated the eye through an arc of 15°, so as to bring its best meridian to the horizontal Without a knowledge of this rotation, he hastily completed his work The demand for rotation still existed after the glass had been given her, and was even more urgent than before, for now the rotation would bring perfect vision Her symptoms continued, for the cause was not removed A knowledge —at that time vague—of this tendency to rotate made me exceedingly careful in placing the axis of her cylinder Vision being now perfect without rotation, the habit was soon broken and ever since she has been comfortable I might refer to other cases, but such reference would occupy too much time

The correction of astigmatism would be as easy as its detection were it not for this tendency to rotate As it is, there is nothing more difficult in ophthalmic practice than the correction of astigmatism when the best meridian happens, as is frequently the case, to be out of the vertical or the horizontal In some cases this tendency to rotate is so persistent that hours of patient work may be necessary for determining the best direction for the location of the axis of the cylinder The strength of the needed cylinder is nothing like so difficult to determine The rotation is not likely to be so persistent when the eye is under the influence of homatropia and when the other eye is covered, as when no medicine has been used and both eyes are allowed to look If the best meridian is at 90° or 180° there can be no difficulty in placing the axis of the cylinder, for the patient's answers will always be the same, the habit of revolving never having been formed

If after most careful work the patient can at no time decide between the two points of 100° and 105°, the point chosen must be at 100°, for it is nearest the perpendicular, the direction in which the eye has always rotated If it happens to be wrong, it will result in partial relief, for the globe will not have to revolve so far as before in order to be the best vision, and the rotation is in the same old direction But if the best meridian is at 100°, and the axis of the cylinder is placed at 105°, the condition after is worse than the condition before the glass was given, for the direction of the rotation must be changed, though the arc to be described is less What is true when the best meridian is near the vertical is also true when it is near the horizontal

The arc between the best meridian and the vertical or horizontal, as the case may be, is often too great to be described by the rotation of the eye resulting from the contraction of one of its oblique muscles In this case an inclination of the head will aid vision We will suppose that the best meridian of the right eye is at 45° I do not believe that the inferior oblique muscle could rotate the eye through so great an arc, but aided by leaning the head to the right the best meridian can be readily brought to the vertical The head may incline 25°, leaving an arc of only 20° through which the eyeball must rotate in order to complete the 45° This leaning of the head as well as rotation of the eyeball are alike involuntary, each being under the control of the guiding sensation in the retina

The inclining of the head by astigmatics I do not claim as an original observation, but the observation of the function of the oblique muscles in certain forms of astigmatism I do claim for myself I believe the observation both correct and practical

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THREE CASES OF SCIATICA

BY J W BROWN, M D,
OF SILVERTON, COL.

Case 1 —In May, 1884, I was consulted by A P, about 30 years of age, a tinsmith He had been suffering over a year from sciatica His ailment was of a subacute character, but it was subject at times to aggravation As a general thing he was able to follow his occupation, though he was never free from pain and constantly limped in his walk He had been subjected to anti rheumatic remedies, antiphlogistics, and counter irritation by the use of fly blisters, liniments and frictions, and at times, for the allaying of acute suffering, morphine by the hypodermic syringe was used I had ministered to him several times for this ailment without accomplishing a satisfactory result He came to me the last time to be relieved from the suffering incident to an aggravation of his trouble I prescribed 1 drop of croton oil made into 2 pills, with the extract of gentian as an excipient, and ordered him to take both pills at one dose The result was a profuse watery discharge from the bowels which brought with it an abundance of scybalous lumps He was almost entirely relieved of his pain and lameness at once, and remained so for several days, so that I had hopes that a complete cure had been effected But the pain and lameness gradually returned, and in about 10 days he was as bad as before I again administered the croton oil, with the result of a similar watery discharge and hard lumps of fæcal matter as before, and again there was relief from pain and lameness, but the sciatica again returned after a few days I concluded that the trouble might be due to the presence of scybala in the rectum or sigmoid colon, the result of constipation, and I prescribed a preparation consisting principally of cascara sagrada, which gradually induced a regular daily habit of sufficient discharge from the bowels, and complete cure of the sciatica

Case 2 —W T, a miner about 43 years old He was injured in February, 1885, while handling timber In tumbling a piece of timber over others, one end of it bobbed up and struck him fairly in the sacro ischiatic notch He fell to the ground in agony and was carried to his bunk in the miners' cabin I had to make a mountain climb of 1,500 feet to reach him I used morphine hypodermically and left morphine powders The next day he was no better The pain was only slight while he remained perfectly still, and

kept the affected limb propped in a certain fixed and semiflexed position, but when he moved the limb, however slightly, a streak of excruciating pain shot down the sciatic nerve and he shrieked with agony On this second visit I applied a blister a foot long down the thigh over the sciatic nerve, and left instructions for its after care I was afraid to use cathartics on account of the patient's inability to manage himself in case catharsis should not bring relief with it, and the use of the croton oil would have been extreme desperation The blister had no appreciable effect My patient was no better than the first hour he was injured, and on my third visit I was in a mood to resort to desperate measures I was getting tired of making a daily mountain climb of 1,500 feet without accomplishing anything, and I went on this third visit armed with 2 pills containing 1 drop of croton oil I found my patient propped in the position he had early found to be the easiest He was not the least improved in his condition, and he was in the constant exertion of a positive mental and muscular effort to keep himself absolutely still He was becoming worn in consequence of this constant effort to avoid the agony incident to the least motion I pondered over his case awhile and over the dire catastrophe which would follow the giving of the croton oil if it should not bring relief with the catharsis I finally resolved that I would administer the croton oil and that my patient must look after the fæces in such manner as his ingenuity might devise I took the pills out of my pocket, and saw my patient swallow them, and then I discreetly retreated down the mountain The result was wonderful So soon as it was necessary on account of propriety that my patient should run he was able to do so He was cured absolutely, immediately, and as if by a miracle He has never suffered a stitch of pain from that trouble since, and the third day following he went to his regular work This was a case, probably, of acute inflammation of the sciatic nerve due to a direct blow, and the mode of relief was extreme depletion consequent on the violent catharsis, conjoined with the counter-irritation of the croton on the mucous membrane of the bowels

Case 3—W A, a miner, about 42 years of age He had had two attacks of sciatica before, the first lasting 4 months, the second 3 months He consulted me in May for his third attack of sciatica The pain was not acute, but was of a dull, aching variety which was increased in severity by walking His gait had the characteristic lameness associated with this affection He said his bowels were regular He might have meant that they were regularly constipated, as the fæcal discharge was scybalous and scanty, though he had been having a daily evacuation I prescribed 1 drop of croton oil in 2 pills, with instructions to take 1 only He took the pill about 8 o'clock in the evening and was kept busy making excursions to and from the water closet until the next morning His pain and lameness disappeared entirely for a time, but gradually returned during the 2 or 3 days following, and he took the second pill without being instructed to do so This pill acted similarly to the first, but not so severely, and he was again relieved for a time only, the pain and lameness gradually returning I then ordered a pill nightly of nux vomica, hyoscyamus and aloes, which was ineffectual, and I prescribed pills of the extract of cascara sagrada, each 2 gr, with instructions to take enough each night to produce a free daily evacuation The use of the cascara finally induced a daily habit, and in the course of 10 days the sciatica gradually left him, ending in a complete recovery

These cases are cited to show that sciatica is not always rheumatoid, but is frequently dependent on simple constipation the correction of which cures the sciatica The use of the croton oil produces a thorough clearing out of the large intestine and gets rid of all retained lumps of fæcal matter The return of the sciatica is due to the reaccumulation of scybala, which produces by irritation or pressure on adjacent nerves a reflected neuralgia down the course of the sciatic nerve, sometimes for its whole length

The use of croton oil in these cases is not original with the writer In 1875 Prof Donald McLean, of Ann Arbor, had a case of sciatica of 2 years' standing in the clinic One drop of croton oil cured his case almost instantaneously, and hence the use of it in the cases above cited The writer was a student at Ann Arbor during the following session, and Prof McLean related the facts of his case to the class Regarding the use of the croton as a severe remedy not devoid of possible bad results, the writer was afraid to use it for several years in such cases as above cited, though the opportunity had presented itself several times Finally necessity compelled its use, and with such remarkable results that the history of these cases has been thought worth a careful study In the absence of intestinal or stomachic inflammation, subacute or chronic, or hyperæmia conjoined with hyperæsthesia, the use of croton is probably quite safe, but of course, in all cases, the oil should only be used after careful elimination of the possibilities of disaster

Silverton, *Colo*, *July 27*, 1887

MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS —(See the preceding number of THE JOURNAL) After treating of "Tuberculosis of the Skin, and Connective Tissue" VOLKMANN takes up II *Tuberculous Affections of Mucous Membranes accessible to the Surgeon*

7 *Tuberculosis of the Tongue* appears partly in the form of ulcerations of a sometimes torpid, sometimes more fungous character, and sometimes in the form of deep-reaching knots (Knoten) which gradually soften at the centre Solitary tuberculous *ulcers of the tongue*, with fungous growths and somewhat indurated surrounding, may be *easily* mistaken for carcinoma when the trouble appears in an elderly person I have twice made that diagnostic mistake, and the error was only discovered by the microscope after extirpation of the diseased

part The subsequent history of these cases confirmed the microscopic diagnosis The knotty (or nodular, *knotige*) form of tuberculosis of the tongue, on the other hand, is at the beginning hardly to be distinguished from gummous affections of the tongue In their subsequent course the cheesy purulent softening of the knots and the transformation into a characteristic abscess, their way of breaking and the whole further course of the affection will leave no doubt as to the character and significance of the trouble The great majority of the cases operated on by me, partly by scraping out and by the application of the thermo cautery, and partly by removal of a wedge shaped portion of the tongue, have probably succumbed later on to pulmonary tuberculosis Some of them have, certainly, remained perfectly healthy for years, even when belonging to strongly hereditarily affected families Whether there are tuberculous processes of the tongue that should be rather classified as lupus remains to be seen

I have twice by autopsy of patients, that suffered from tuberculosis of bone and died of pulmonary tuberculosis, found the entire surface of the tongue covered with perfectly superficial, confluent tuberculous ulcerations, from the size of a pin's head to that of a flax seed, between which were everywhere scattered characteristic miliary tubercles The process had only appeared in the last few weeks before death, and had been taken for aphthæ

8 *Tuberculosis of the Pharynx and Palate*—I have seen almost exclusively in young persons, about the period of puberty and shortly after it Flat, confluent ulcers, as large as a millet seed and larger, with yellow base, spreading from the palatine arch over the posterior wall of the pharynx and the whole posterior surface of the velum palati By strong light it is generally possible to discover the miliary tubercles between the separate ulcers The affection is easily mistaken for congenital syphilis

The extensive adhesions of the cicatricially contracted velum palati, with complete or almost complete exclusion of the pharynx from the nasal cavity, and certain forms of cicatricial stenosis of the pharynx immediately above the larynx, are oftener to be referred to healed up tuberculous ulcers than to syphilis In its severe forms the latter produces rather defects on the palate, whilst tuberculosis produces extensive ulcerating surfaces which are specially prone to cause adhesions later on

Energetic surgical treatment is easier to institute and decidedly more promising than in laryngeal tuberculosis Probably most of the patients die of pulmonary affections before the pharyngeal tuberculosis is cured, even if they be not already suffering from pulmonary disease, but permanent cure by early local treatment with caustics, the hot iron, scraping, etc , certainly does take place, and I have repeatedly observed it

9 *Ozæna tuberculosa*—There is an ozæna tuberculosa, caused by the formation of true tuberculous ulcers in the nasal mucous membrane, and which is to be sharply distinguished from the very much more frequent so called rhinitis scrophulosa, which is simply caused by catarrhal conditions Still more seldom do primary tuberculoses of the osseous structures of the nose, particularly of the upper jaw, secondarily lead to infection and specific diseases of the nasal mucous membrane

10 *Tuberculosis of the lips*—I have twice seen severe tuberculous (not lupous) ulcerations on the lips Once in the case of a young girl with multiple focus tuberculosis (Herdtuberculose) and sound lungs, and once in the case of an elderly lady In the first case the deeply reaching ulcer was removed by a wedge shaped incision, and in the second case the more flat ulceration, surrounded by thick crusts and sclerosed connective tissue was mistaken for a carcinoma, and was maltreated with superficial cauterizations In this case excision and a plastic operation were necessary

11 *Fistula in Ano*—Some rectal fistulas already have the significance of tuberculous ulcers The relation between rectal fistulas and tuberculosis of the lungs, so strongly emphasized by the older surgeons is explained, or rather corrected, by this fact The tuberculous fistula in ano differs from the non-specific by its tendency to form great masses of fungous granulations, widespread loosening of the mucous membrane and undermining of the outer skin, as well as sinuous abscesses

The treatment must therefore be the same as for tuberculous abscesses free incision, scraping out of the fungous granulations, removal of the thin strips of skin and mucous membrane, open treatment by packing in antiseptic gauze, especially iodoform gauze In obstinate cases energetic cauterization with the hot iron should also be used

12 The analogue of tuberculous rectal fistula is found in the rare cases of insidiously developing perityphlitis It begins after the perforation of a single specific ulcer of the intestine, in otherwise still healthy persons who up to this time have presented no symptom of intestinal tuberculosis, and runs its course in the same way, forming large tuberculous abscesses, multiple fistulas, and extensive solutions of the skin, and also with the production of massive tuberculous (fungous) granulations —*Langenbeck's Archiv*, Bd xxxiii, Hft 1

OATEN FLOUR IN THE TREATMENT OF BURNS — MR G GREENE says The comparative success attendant on the adoption of the following line of treatment, together with the fact of my being unaware of its having been advocated before, is my reason for bringing the matter under the notice of the profession Different treatments have been from time to time suggested with the object of favoring the healing of burns and scalds with in many instances questionable results I have for some time been in the habit of using for all degrees of these injuries equal parts of fresh lard (that is, free from salt) and oaten flour made into a paste, which, when spread on a cloth (old calico), or preferably a piece of lint, I direct to be applied or rolled round the affected part or limb, and allowed to remain on twenty four hours, after which a fresh application is made, and so on every twenty-four or forty-eight hours, as the exigencies of the case

demand In every instance I was well pleased with the progress of cases subjected to this treatment, several of which had been ineffectually treated by other methods

The advantages which I claim for this application are (1) its freedom from odor, (2) its soothing properties and antiseptic action, (3) its superior healing powers, and lastly, its cheapness and the ease with which it can be procured (in most houses) on the shortest notice This latter advantage is of no small importance, taking into consideration the sudden and frequent occurrence of injuries of this nature in ordinary domestic life —*British Medical Journal*, Sept 24, 1887

ERGOTIN AS AN ADJUVANT TO DIGITALIS —ROSENBACH, in the *Berliner klinische Wochenschrift*, No 34, 1887, reports good results from the combination of these remedies in (1) aortic insufficiency, (2) in idiopathic dilatation of the heart, with alterations in the elasticity and contractile power of the blood vessels, (3) in arterio sclerosis

He suggests the following formulæ

℞ Inf sec cornu	ʒ2½
Æther sulphur	♏45
Acid hydrochlor	♏15
Aquæ	℥3½ —M
Sig Teaspoonful every two or three hours	

Also	
Ergotin	gr 30 to 60
Acet digital	♏75
Aquæ	℥1½ —M
Sig Tablespoonful as indicated	

In pill form	
Ergotin	gr 45
Pulv fol digital	gr 30
Pulv et ext gentian	q s
Ad pil 50 in num	
Sig Dose two or three pills	

Also	
Infus fol digital	♏23
Ergotin	gr 30
Aquæ	℥4½ —M
Sig Teaspoonful every two hours if needed	

—*Medical News*, Oct 15, 1887

CREASOTE IN THE TREATMENT OF PULMONARY PHTHISIS —FRAENTZEL has used this remedy since 1878, chiefly in cases without fever, cough, or complications The following formula was employed

Creasote	13	parts
Tincture of gentian	30	"
Brandy	250	"
Sherry, enough to make	1,000	" filtered

A tablespoonful is given two or three times a day, in a glass of water, and at the same time two tablespoonfuls of cod liver oil are given daily The patients are kept, day and night, in freely ventilated rooms and are fed abundantly Improvement is manifested by gain in weight, increase of the appetite, diminution of the cough, expectoration, and pain, a reduction of the area of dulness, and the disappearance of bronchial souffles Out of 400 patients treated by this method, 150 have been permanently benefited —*N Y Medical Journal*, Oct 22, 1887

ICTERUS NEONATORUM —SILBERMANN (*Arch f Kinderheilk*, Bd 8, cited in *Fortschr d Med* No 19) has studied the subject of icterus neonatorum, and arrived at the conclusion that it is a jaundice of reabsorption and of hepatogenous nature The bile stasis occurs in the bile capillaries and interlobular ducts, which are compressed by the dilated branches of the portal vein and blood capillaries of the liver The congestion of these vessels is brought about by the changes in the hepatic circulation that arises soon after birth, which is one effect of a general change of the blood plasma This blood change is a sort of fermentation depending upon the destruction of red corpuscles shortly after birth The icterus is more marked in the more feeble infant, for in it the blood changes are more considerable than in the strong The destruction of red corpuscles and their accumulations in the hepatic vessels afford material for the formation of bile in excess —*Lancet*, Oct 15, 1887

CREOLIN VS CARBOLIC ACID —E VON ESMARCH, assistant in the Royal Hygienic Institute of Berlin, has made a series of experiments with creolin, a new disinfectant, which has been highly spoken of by Professor Frohner of the new Veterinary School of Berlin Dr von Esmarch made a number of comparative observations with carbolic acid on the disinfecting, deodorizing, and antiseptic properties of creolin Amongst other observations, he noted the effects of the two substances on fluids containing cholera, typhus, and anthrax bacilli As a rule, creolin appeared to be much the more active Similarly the offensive smell of various putrefying liquids was controlled much more readily by creolin than by carbolic acid Creolin soap, too, showed itself more active as a disinfectant than corrosive sublimate soap —*Lancet*, Oct 15, 1887

THE TREATMENT OF ABORTION IN THE OBSTETRICAL CLINIC OF FLORENCE —FASALA has observed the following rules in the treatment of abortion, with good results

1 An expectant course is pursued when the cervix uteri is closed and can be dilated with difficulty, and if no signs of decomposition of the fœtus are present

2 Under conditions favorable for the introduction of instruments or the hand, the ovum and its appendages are promptly removed

3 If decomposition has begun, the cervix is dilated by laminaria tents or metallic dilators, and the ovum is removed

4 Intra uterine injections for antisepsis are made with warm solutions of bichloride of mercury, 1 to 2000, in case of hæmorrhage, hot solution of bichloride of mercury, 1 to 4000, and tamponing the vagina, are used —*Annali di Obstetricia*, March, 1887 *Medical News*, October 8, 1887

GALVANISM IN ULCER OF THE TONGUE —In the *Paris Médical* of July 23, is a report of a case of ulcer of the tongue cured by the continuous galvanic current The treatment required 18 months and 109 *séances*

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, NOVEMBER 5, 1887

THE TEXAS SPECIAL COMMITTEE ON SURGERY

Some years ago an English medical weekly asked "What good (professionally, that is) can come out of Texas?" Even had this question not been answered before, a sufficient answer may be found in the two first reports of the "Special Committee on Surgery of the Texas State Medical Association" Besides the matter contained in them these reports, for 1885 and 1886, show three things that the surgeons in Texas recognize and do their duty to the profession by contributing to the stock of common knowledge, that the Texas State Medical Association is fully alive to the interests of the profession in appointing such a Committee, and that a State medical association can find a committee to do good work

The first report contains, so far as the records could be had, a statistical summary of all the surgical operations performed in Texas up to 1886—4,293 operations being tabulated The report for 1886 contains a tabular statement of 1,046 operations The death rate of all operations up to 1886 was 8 15 per cent , the mortality for the 1,046 operations for 1886 was 7 93 Beginning with amputations of the thigh we find that the mortality of the 150 operations performed was 36 per cent Five double amputations of the thigh gave 1 recovery Of the 54 fatal cases antiseptics were not used in 41 cases Of the cases that recovered antiseptics were used in 37 cases From the make up of the report it seems that antiseptics may have been used in some cases in which it is not stated Eighteen cases died in 24 hours or less, 4 died of pyæmia or septicæmia, 3 of gangrene, from neglect in 2 cases, 2 died of tetanus, and 1 had tetanus and recovered, 1 died of pulmonary congestion from ether, 1 died of erysipelas, and in 24 cases the cause of death is not stated In 37 cases the operation was performed for railway injury, gun shot wound, or other severe traumatism The anæsthetic was chloroform in 130 cases, ether in 8 cases, and chloroform and ether in 11 cases, not stated in 1 case The shape of the flap is not stated in many cases, nor is the time after injury at which the operation was performed Inasmuch as the date of operation is not given in the first report it is, of course, difficult to form an accurate opinion of some things regarding the operations

Of 97 amputations of the leg 37 died, 18 78 per cent , 8 double amputations with 2 deaths, 1 being complicated by a railway injury to the head, the other a double operation on leg and thigh for railway crush, and died of shock Antiseptics are mentioned in connection with 65 operations, of which number 18 were fatal—29 38 per cent Five cases died of shock, 1 case of triple amputation, both legs and one hand, died of exhaustion in 2 days, 3 died in 24 hours, 3 of secondary hæmorrhage, 3 of tetanus, 1 died on 30th day, having passed from operator's care on 10th day, 6 died of pyæmia and septicæmia, carbolic acid being used in 4 cases, the operation being performed for compound dislocation of ankle, necrosis and gangrene from old gun shot wound, chronic ulcer and necrosis, compound comminuted fracture of both bones (never rallied from shock), gangrene, and old ulcer, 1 died of exhaustion after amputation for senile gangrene, 1 of exhaustion and dysentery, the operation being for railway injury, 1 of gangrene, operation for railway injury, 1 from cachexia in 40 days, operation for cancer of heel, in the other cases the cause of death is not mentioned

Thirty two disarticulations of the shoulder gave 4 deaths—12 5 per cent , the operations being performed for gun shot wound, gangrene after wounds of elbow, railway crush of shoulder, and railway crush of arm, leg and trunk, in the third case the arm was removed, with neck of scapula and part of clavicle, and subclavian tied in lower third, operation performed on third day, and death from septicæmia on sixth day Eight disarticulations of the hip gave 4 deaths, 1 died in 20 minutes and 1 in 2 hours, both after gun-shot wounds, and 1 in 4 hours, after railway injury Eighteen disarticulations at knee-joint gave 4 deaths, 1 being an engine crush of both legs, right thigh amputated, 1 of neglect of nurses and secondary hæmorrhage, 1 after operation for necrosis of tibia, and 1 of septicæmia, after secondary hæmorrhage

The tables of resections are interesting, and include some total excisions The most interesting of these operations was a case of removal of the whole eighth dorsal vertebra for crush from the fall of a tree The patient died on the sixth day from a wound of the lung, the paralysis having all gone In reporting the cases many of the operators committed the error of not giving the result as to the subsequent usefulness of the limb Three cases of resection of the sternum in continuity are reported, all for caries, 2½ inches being removed in 1 case All recovered Of the 55 cases of resection of joints 2 died, neither from the operation Of 63 cases of resection of bone in continuity none died

Eighty-four ligations are tabulated, with 11 deaths, these include ligations of the subclavian 4 cases, 2 deaths, 1 from perforation of pleura by aneurismal sac, internal mammary 1, axillary 3, brachial 17, 2 deaths, 1 from secondary hæmorrhage, common carotid 6, 3 deaths, from hæmorrhage on twenty-second day, in 6 hours from exhaustion, and from reopening of sac of returned aneurism and tying external carotid and internal jugular, external carotid 4, 1 death, just mentioned, external iliac 4, 1 death from repeated hæmorrhage, common femoral 2, 2 deaths from recurring hæmorrhage, superficial femoral 10 cases, popliteal 1, and other minor ligations

Under the head of "trephining bones of the cranium" we find 44 observations tabulated, with 8 deaths In 17 cases the operation was performed for recent *depressed* fracture, with death in 2 cases, in 11 cases for epilepsy after fracture or other cranial injury, 1 death, 2 permanent recoveries, improvement in 2 In one case, after old fracture of parietal bone, and epilepsy, there was profound coma, which was relieved by withdrawal of pus, 5 crown-heads were removed, and a spiculum lying on dura, exploration and incision evacuated the abscess, a drainage tube was used for 10 days, hernia cerebri occurred, which was treated by compression by flaps of scalp, recovery was rapid and permanent In one case of depressed fracture from railway injury 27 fragments of bone were removed The patient was comatose for 9 days and then recovered

Of tracheotomy for foreign bodies 43 cases are tabulated, with 4 deaths For disease the operation was performed 69 times with 49 deaths

One hundred and fifteen amputations of the female mamma gave 7 deaths, 6 after operations for cancer, for which the operation was performed 98 times The causes of death after the operations for cancer were general erysipelas 1 case, phthisis 1 case, rapid recurrence 1, congestion of lungs from anæsthetic 1, septicæmia 1, died on table from anæsthetic 1, extension of disease 1 Of the 92 cases which recovered, the result as to permanence is given as complete in 3 cases, no recurrence after 12 years in 1 case, after 9 years in 1, after 7 years in 3, after 6 years in 2, after 5 years in 1, after 3½ years in 1, after 2 years in one, after 1 year in 3, indefinite 11 In one case relapse occurred in the cicatrix after 10 years, recurrence and death in 1 case after 5 years, in 4 cases after 2 years, recurrence 5 times after 3 years, 7 times in 1 year, four cases in 6 months, and in 5 cases at an indefinitely stated period Sarcoma is mentioned twice, and 5 other cases were probably sarcomatous, all of these recovered without recurrence, except one, in which the result is not stated

One case of gastrostomy is reported by Herff, for impermeable stricture of the œsophagus from swallowing concentrated lye Howe's operation, gastrotomy at two periods, was performed The child, 7 years old, regained her health perfectly, was alive 6 years after the operation, strong and well nourished, though always fed through the fistula Herff also gives 2 cases of splenectomy In the first case the spleen was detached from the stomach and lying across the umbilical space Old adhesions to the parietes were detached by the fingers, and about ten vascular adhesions ligated A pedicle of vessels was included in Atlee's clamp The spleen weighed 4½ pounds The maximum temperature reached was 100°, pulse 80, no vomiting The wound healed and the sutures were removed between the fourth and sixth days, and the clamp on the seventh On the same day the woman had an angry altercation with her husband, which was followed by the expulsion of a macerated fœtus, tetanus, and death on the following day In the second case a leukæmic spleen was removed, it filling the whole abdominal cavity and pushing up the diaphragm The organ weighed 13 pounds Death was due to hæmorrhage from the broken short adhesions which could not be tied

Cupples reports a case of operation for carcinoma of the pylorus of more than a year's standing, the patient being extremely emaciated There was rapid recovery from the operation, and great relief to stomach symptoms The patient went 500 miles to his home, and died some weeks afterwards Herff reports a nephrectomy for sarcoma of supra renal capsule and kidney, which was floating, the patient made a perfect recovery

Want of space prevents our making a more complete analysis of this report at this time But one of the objects had in view in noticing this report at such

length was to show that such reports are of great value, another was to show that something good can "come out of Texas" Few can form any idea of the immense labor required in making out such a report, and too much praise cannot be given to the Committee, the chairman of which is Dr George Cupples, of San Antonio

TUBERCULAR LESIONS OF THE LUNGS

The "line of march" of tubercular lesions of the lungs is discussed in a most interesting way by Dr J K Fowler, in the October number of the London *Practitioner* The apical position of the primary lesion has been recognized almost as long as we have had exact information about diseases of the lungs But the path and course of extension of the tubercular inflammation has been little studied In 1882 Dr William Ewarts' excellent Gulstonian Lectures on "Pulmonary Cavities" threw much light on the location and mode of growth of these lesions He showed that cavities at the base of the lungs were very rare, that they occurred at the apex oftenest, in the dorso axillary region a little less frequently, and in the mammary still less frequently, although in about one half of all the cases

Dr Fowler aims especially to point out the order in which the tubercular lesions appear, and the tract along which the infection travels in the lungs He claims that in chronic cases, as a rule, the morbid changes follow a definite path In acute cases exceptional courses of development are common

The primary lesion almost invariably is found in the apex of one or both lungs, or rather about an inch below the true apex This corresponds externally with the supra clavicular fossæ Often, but somewhat less frequently, the primary lesion is so located as to correspond with the first and second interspaces below the outer third of the clavicle The direction of the extension of these primary lesions is backward and downward chiefly

From apical primary lesions the first secondary one is usually at the apex of the lower lobe The latter appears very early, as a rule, often when the primary tubercular nodule is no larger than a cherry The location of this secondary lesion is about one to one and a half inches below the upper and posterior extremity and about the same distance from the posterior border of the lower lobe It tends to spread backward and downward along the line of the interlobular septum, producing a wedge shaped mass of consolidation The location of the lesion corresponds with the inner border of the scapula when it is drawn as far away from the vertebra as possible Further extension towards the base of the lower lobe does not take place by a direct increase of the area of consolidation so much as by the formation of irregularly scattered tubercular nodules The base of the lung is very rarely affected to any extent, and in the majority of cases contains no tubercular material When this is not true the lung tissue has first been weakened by pneumonia, pleurisy or similar affections

The middle lobe of the right side often escapes invasion, and if involved, is not usually until late in the course of the disease The lesion generally is tuberculo pneumonic in character, and follows a primary lesion of the upper lobe of the same side The area of consolidation may be considerable, but the area of softening is generally small

When the opposite upper lobe is secondarily affected, which, as a rule, occurs early, the lesions are located symmetrically in both lungs A third location is noticed in secondary lesions at times This is close to the interlobular system about halfway between its upper and lower extremities, and corresponds on the chest wall to the upper part of the axilla

When the lower lobe of the opposite lung is secondarily affected the lesion is similar to that on the side primarily involved Almost invariably the primary lesion is in the apex of one lung, the next lesion appears in the upper part of the same side, and then a third focus of disease may appear, symmetrically located in the opposite lower lobe Rarely this order is found changed and the lower lobe of the lung primarily affected is untouched by the disease, which appears secondarily in the apex of the lower lobe of the opposite side

Dr Fowler believes that in those cases that illustrate most perfectly the eruption of lesions in the order just sketched, the infection of new lung areas is by means of the secretions carried through the bronchial tubes to the various parts of the lungs. When infection occurs through the agency of the blood the foci of the disease follow no plan as regards place or time of appearing Also when infection of new areas takes place through the lymphatic channels it follows no longer the plan and course described The information given us by Dr Fowler, if confirmed, will enable us to judge more definitely of the stage of advancement of the disease, at least in all chronic cases, and furnishes us also with landmarks which locate the lesions Of the importance of locating the secondary lesion near the upper posterior part of the lower lobe he says "The infiltra-

tion of the lower lobe at this spot in the early stage of phthisis is one of the most constant features in the pathological anatomy of the disease, and its recognition is a matter of much importance, as in doubtful cases it is almost positive proof of the existence of tuberculous disease of the lungs I have seen extensive lesions of the apex not presenting a trace of tubercle in which the lower lobes were quite free from disease The existence of this lesion as a test of the tubercular nature of the disease holds good, I believe, as a positive test, but its absence does not negative tubercle "

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS

At a meeting of the Executive Committee on October 5, in Philadelphia, nine *Special* Societies were represented by one member from each Society Of the nine representatives present, four were from New York, two from Philadelphia, one from Baltimore, one from St Louis and one from Alabama Dr Wm Pepper was made Chairman and Dr John P Bryson, Secretary The first regular meeting of the Congress is to be held in Washington, D C, September 18, 19 and 20, 1888, the sessions of the *Congress* to be held in the evenings, leaving the day for the Special Societies to meet for their own work separately It is worthy of notice that the American Gynæcological Society, which is one of the largest and most influential of the National organizations of specialists in this country, at its recent meeting in New York refused to join the proposed Congress, and appointed its next annual meeting in Boston, Mass, to commence on the *third* Tuesday of September, 1888 As the entire aggregate membership of the nine cooperating specialist societies does not probably exceed 350, or less than half of 1 per cent of the regular practicing physicians and surgeons in this country, their assumption of the name of "The Congress of American Physicians and Surgeons," will hardly deceive anybody but themselves Neither will the amount of scientific work they will be likely to accomplish in three September evenings at Washington, in addition to two sessions in separate society capacity on the same days, be sufficient to astonish the professional world

THE WESTERN PENNSYLVANIA MEDICAL COLLEGE, Pittsburg, is reported to have commenced its second annual course of instruction with a class of nearly 100 students, which is the more gratifying, as the Faculty recommend a full graded three years' course

WILLIAM SCOVELL SAVORY, F R S, London, has been appointed by the Queen Surgeon Extraordinary to her Majesty, in place of the older Richard Quain, recently deceased

COMPLIMENTARY —We see it stated by cablegram that the Sugar-Coated Pills and Effervescing Salts, furnished by W R Warner & Co, Philadelphia, received the highest award for superior quality from the American Exhibition in London

SOCIETY PROCEEDINGS.

PHILADELPHIA PATHOLOGICAL SOCIETY

Stated Meeting, September 22, 1887

THE PRESIDENT, J C WILSON, M D, IN THE CHAIR

DR W OSLER presented a specimen of

THROMBOSIS OF THE PORTAL VEIN

Chronic obstruction to the blood flow in the branches of the vena portæ within the liver, such as occurs in cirrhosis, is probably the most common cause of this rare condition We not infrequently meet with atheroma in the portal vein and its branches in cirrhosis, one factor in the production of which, as in the pulmonary artery in mitral stenosis, is the heightened blood-pressure, and to this change the thrombus formation is closely related At first, and possibly for a long time, mural, it gradually becomes obliterating, and if the collateral circulation is established, the patient may live some time, as in a case which I reported in 1882 (*Jour Anatomy and Physiology*), in which the vein was represented by a firm fibrous cord The specimen here shown was taken from a Swede, aged about 45, who was admitted to the University Hospital May 7 with ascites As he could not speak English it was difficult to obtain a history, but we ascertained that he had been in failing health for some time, and latterly his abdomen had become swollen It did not appear to have come on suddenly The liver dulness was reduced, the superficial abdominal veins were moderately distinct, and the case was regarded as one of ordinary cirrhosis He was tapped five times between May 20 and July 14, and from 12 to 15 pints of serous fluid removed on every occasion He was able to be up and about after each tapping, but he gradually became emaciated, weak, finally comatose, and he died July 20 There were no hæmorrhages, and it may be stated that the abdominal veins were at no time more distended than is common in atrophic cirrhosis The condition post mortem was as follows fibrous adhesion in peritoneum, atrophic cirrhosis of liver, with thickened capsule, old firm thrombus in vena portæ, extending into splenic and mesenteric veins, thickening and patchy

calcification of the walls of the portal vessels, great enlargement and induration of the spleen, kidneys indurated, no special changes in thoracic organs A careful dissection of the abdominal veins was not made, but I am told by Dr Miall, who made the autopsy, that the peritoneum was very dark and the veins behind the liver very large The collateral channels were, no doubt, largely the anastomoses which exist between the peritoneal, mesenteric and lumbar veins and the gastric, diaphragmatic and œsophageal vessels As in the case of fibroid obliteration referred to, a perfect collateral circulation may be established in occlusion of the portal vein, and the patient may live for months or years In this instance the thrombus was evidently old, as in places there were calcareous changes The branches in the liver were filled with soft clots The gall bladder was full of normal bile In two other cases of cirrhosis I have met with thrombi in the portal vein, in both instances with thickening and atheromatous changes in the vessel walls, but the thrombi had not undergone such degenerative changes as in this specimen

Dr H F Formad presented a specimen of

CHRONIC HYPERTROPHIC CIRRHOSIS OF THE STOMACH WITH GASTRIC ULCER, AND COLLOID CHANGE OF THE MUCOUS MEMBRANE

A sailor, aged 38, a German, was admitted to the Naval Hospital 10 months ago with the symptoms of dyspepsia and occasional vomiting There had been absolutely no pain at any time and no vomiting of blood Three months before death he began to have serious difficulty with swallowing, with œsophageal regurgitation, and though a stricture was sought for none was found Very curiously, for a few days immediately preceding death he swallowed well Death resulted from starvation At the autopsy the abdominal cavity was found to contain 52 ozs of straw colored fluid and showed evidences of old peritoneal inflammation, especially at the upper part, where the organs were matted together into one mass The stomach was quite contracted, having a capacity of 4 to 5 ozs Its walls were ½ to 1 inch thick, the thickness greatest at the cardia and gradually diminishing till within 2 inches of the pylorus, where the wall abruptly resumed its normal condition The first impression given was that it was a case of cancer, but closer examination showed it to be simply great thickening of the wall with polypoid elevations of the mucous membrane and secondary colloid change The ulcer was situated in the posterior wall near the cardia, its bottom formed by tissue in the spleen and the peritoneal coat of the transverse colon Communication with the abdominal cavity had been prevented by firm adhesions The omentum contained a number of colloid granules as large as peas The abdominal lymph glands appeared to be amyloid The case was remarkable, first, in the complication of hypertrophy with gastric ulcer, a condition which the reporter had never before seen, second, in that the hypertrophy should commence at the cardia instead of at the pylorus

Dr Formad also presented the specimen of a

STAB WOUND OF THE ABDOMEN

Laparotomy had been performed and a wound of the intestine found, which was sutured The man died suddenly 60 hours after the operation At the autopsy there was only a very slight amount of peritonitis found and the wound in the intestine had firmly united The abdominal condition not being sufficient to account for death, the brain was examined and a very distinct embolus in the floor of the fourth ventricle found The stomach had not been touched, but on its peritoneal surface were some slight tears, and opposite them in the mucous membrane, but not corresponding exactly with them, were several distinct, small linear ulcers, which appeared like ulcers due to some injury They did not look at all like ordinary ulcers, but still had evidently formed ante mortem There was an old hæmorrhagic infarct of the kidney

Dr Osler had been particularly interested in the first specimen, and had hoped that possibly it might prove to be related to the formation of gastric ulcer in the way pointed out by Dr Baumgarten, and to which he wished to call attention, namely that the movement of the stomach against the costal edges produces distinct localized thickenings, and that in corresponding points of the mucous membrane ulcers form

Dr Formad also presented a specimen of

GUNSHOT WOUND OF THE HEART

The ball had entered the chest between the fourth and fifth ribs on the left, passed through the left ventricle, and was found imbedded in the spinal column Death was instantaneous The principal point of interest lay in the fact that the ball had traversed the cavity of the left ventricle near its base without injuring the chordæ tendineæ or the leaflets of the mitral valve

Dr Wescott presented

A MEDIASTINAL TUMOR,

removed from a man, aged 28, who had entered the University Hospital a week ago He was a brakeman, with good family history and personal habits, and no venereal history He had been in good health and at his work till last July, when dyspnœa developed and he quit work About the same time he noticed a tumor in his neck There was no pain nor difficulty of swallowing On admission he was in a condition of orthopnœa Over the left side of the chest there was complete dulness, extending to the right edge of the sternum, with absence of respiratory murmur The apex beat of the heart could not be seen or felt The tumor of the neck involved the superficial lymph glands and could be traced behind the sterno cleido mastoid muscle and down into the chest There was no inequality of the pupils and no œdema At the autopsy, on opening the chest nothing but a large fleshy mass and the edge of the right lung could be seen The mass penetrated the chest wall between the first and second ribs and became continuous with the tumor in the neck It was closely attached to the bodies of the dorsal vertebræ from the first to the fourth, filled all

the upper part of the left chest, and completely enveloped the great vessels The œsophagus was pushed to one side but not compressed The left lung was completely collapsed and contained numerous secondary nodules The heart was pushed down and back, but was normal The mesenteric glands were enlarged A section of the tumor showed largely fibrous tissue The reporter asked whether, in the case of such a large mass, the absence of pressure symptoms was not remarkable?

DR J B WALKER said that in the absence of pressure symptoms such a large tumor was, in his experience, unique, generally very much smaller ones giving rise to marked symptoms

CHICAGO GYNÆCOLOGICAL SOCIETY

Regular Meeting, Friday, June 24, 1887

THE PRESIDENT, CHAS WARRINGTON EARLE, M D, IN THE CHAIR

DR JOHN BARTLETT read the following paper, entitled *Several Items of Obstetrical Interest*

IS QUININE AN OXYTOCIC?

Some twenty five years ago, as well as my memory serves me, the question began to be mooted whether quinine was an abortifacient and oxytocic or not Prior to 1862, so far as I am aware, preparations of cinchona were given to pregnant women freely and without any suspicion that harm might result therefrom To day the profession is divided in opinion on this subject, some scrupulously withholding quinine from the pregnant woman, others giving it without reserve In the course of my reading, I have chanced upon an observation of Mauriceau's which indicates that two years prior to Sydenham's notice of the bark, this obstetrician had sought an answer to the query in question I quote Obs CCLXXII "On the 28th of October, 1680, I delivered a woman who had during a period of fifteen days three or four violent accessions of tertian ague, which obliged me, after a bleeding from the arm, to administer cinchona By the use of this remedy the fever entirely ceased After having continued in good health for ten or twelve days, she was happily delivered of a large healthy boy This experience caused me to recognize a fact, which has since been confirmed by a number of similar cases, to wit, that pregnant women can take cinchona with the same benefit as other persons, without its occasioning any injury to the mother or child "

I cannot but regard it as a curious and interesting fact that a question as to the specific action of a medicine put forth in 1680 should be *adhuc sub judice*

Last year I reported to this Society a case of

PLACENTA PRÆVIA IN WHICH THE PLACENTAL TISSUE EXTENDED OVER THE ENTIRE OVUM

Cases have been reported by Sirelius, Barnes, Hegar, Hicks, and Judell in which placentæ have been so spread out as to occupy nearly the whole of the internal surface of the uterus In connection with this subject, I call your attention to the following observation of La Motte's

Observation CCCCI—"The 22d of July, 1717, Dr Ducet sent to desire me to go to a farmer's wife, two leagues off, who had been in labor ten days and ten nights, during which time she had not the least rest" (La Motte here proceeds to describe how he delivered by turning and continues) "I had a great deal of trouble in bringing away the placenta, which was not one-third so thick as usual, but merely membranous, of about the thickness of a child's diaphragm, it not only adhered to the bottom of the uterus, but to its whole circumference, so that a young practitioner would hardly have believed that any placenta at all was left behind"

PLACENTA PRÆVIA WITH CERVICAL ATTACHMENT

In Charpentier's treatise on obstetrics, we find the following list of authors who admit that in certain cases of placenta prævia it is possible that the placenta find attachment within the neck of the uterus Sirelius, Barnes, Thudicum, Chavanne, Marchal, Thévenot, Keppler, Pajusko, Rokitansky, Sackreuter, Mettenheimer, La Chapelle, Pinard, Tarnier, Hubert, and Noel

I desire to prefix to this list the name of Andre Levret From his work, "L'Art des Accouchmens," I extract the following passage from his paper on Placenta Prævia published at Paris in 1751 Page 373 "An interesting question naturally arises in this connection, Why some women having the placenta adherent in the neck proper of the uterus arrive at term, whilst others, by far the majority, under the same condition do not reach the normal limit of gestation?

"This variation in effects proceeding from the same cause must depend upon some particular circumstance as a determinating clause I explain the matter in this way According as the placenta is primarily attached higher or lower in the neck proper of the uterus, hæmorrhage will occur sooner or later Thus when that vascular mass has taken root nearer to the os tincæ, the woman will be able to approach nearer to the term of gestation than if it had been implanted as high as the constriction (internal orifice) of the uterine neck And thus the time of interruption of the pregnancy by bleeding will vary with the level of attachment of the placenta between the two extremities of the neck It is demonstrated as well by the mechanism of pregnancy as by the daily experience of the accoucher, that the neck does not begin to expand to aid in augmenting the capacity of the uterus except in the later months of gestation, and that it is by segment that the cervix continues thereafter to expand from above downwards Now, the neck cannot thus expand without sooner or later obliging the placenta, which is not susceptible of like expansion, to detach itself in part, either in some point of its circumference if it be more advanced upward on one side than on the other, or at its centre if this be in exact correspondence with the upper end of the cervical canal It follows then as a necessity that a hæmorrhage shall occur at a time more or less near or more or less distant from the natural term of pregnancy, according as the placenta shall be at-

tached further from or nearer to the [lower orifice of the] central canal

The credit of first suggesting

ABDOMINAL SECTION IN THE TREATMENT OF RUPTURED OF THE CYST IN ABDOMINAL PREGNANCY

is generally given to Osiander and Heim In Levret's work on obstetrics may be found the following sentences His appreciation of the difficulty incident to the detachment of the placenta in such a case is complimentary to his foresight and sagacity

"In extra uterine pregnancy, the fetus inclosed in the Fallopian tube or ovary ordinarily bursts its envelopes before full term, and the mother perishes of hæmorrhage with her infant in her abdomen This sad accident seems to indicate abdominal section, but I doubt very much whether an operation would succeed in saving the mother even if there were present sufficient symptoms to enable one to decide, and to decide promptly, upon an operation Because, it would be necessary, in order to hope for success, that the site of attachment of the placenta should have power, such as the womb has to contract very powerfully and quickly, and that is an impossibility"

DO DIRECT-TRACTION FORCEPS EXERT DANGEROUS COMPRESSION?

Some writer has said that, after inventing an instrument, the first thing that one meets is an objection It is objected to the Tarnier direct traction forceps that the screw by which the handles are approximated so as to take hold of the head may exercise a dangerous compression My object in this communication is to show that such compression need not be made, and that the screw does not therefore constitute an objection to the instrument

I beg leave here to quote from Dr Barnes He says "Let us study the power of the forceps How does it take hold? You may at first sight suppose that this is accomplished by grasping the handles The hold, especially in short handled forceps, cannot be due to the handles It is really due to the curvature of the blades, which fit more or less accurately upon the globular head, and the compression of the bows of the blades against the soft parts of the mother, supported by the bony ring of the pelvis In many cases, this outward pressure upon the bows of the blades is enough to serve for traction It is not necessary to tie the handles of the forceps You may even do without handles altogether

For a few years past I have used the direct traction principle in almost all cases of forceps delivery And I have found that my hold upon the common handles becomes more and more slight as experience enlarges So that in an ordinary case of delivery, the fingers of the left hand rest upon the handles rather to ascertain whether compression be needed than to press the handles together

Recently I have witnessed two cases of delivery as an assistant to Dr J H Hooper, who uses forceps provided with direct traction handles I was surprised to find that he frequently let go of the ordinary handles entirely and while he pulled upon the traction handle with one hand, he used the other to determine the progress of the head, or to sustain the perineum Upon inquiry I learned of Dr Hooper that he did *not* ordinarily clasp the handles, only when powerful traction was applied did he deem it necessary to do so I think it may be said that such compression as may be needed may be employed to the ordinary handles of a direct tractor by means of a screw or otherwise, without fear of injury to the child

THE VERNIX CASEOSA, AN ELEMENT OF ERROR IN THE DIAGNOSIS OF THE CHARACTER OF PUERPERAL HÆMORRHAGE

Several months since, I was called to a woman pregnant with her eighth child at full term Six hours prior to this visit, without exciting cause, there had been so great a flowing as to demand the use of the tampon The os uteri was then closed, there had been no pains until the last half an hour I found the pains active, and hæmorrhage free, and increased during uterine contractions The os uteri was two centimetres in diameter and softened, through it could be recognized the globular form of the head Between the presenting part and the finger could be plainly felt a thick plate of tissue firmer than a clot, and of the consistence of a placenta Over its surface could be traced depressed sulci, districting the mass into lobuli No doubt was entertained as to the nature of the case I had never met with an instance in which the diagnosis of placenta prævia was so speedy and so positive Assistance was immediately sent for I was disturbed in the hurried preparation for such interference as more thorough examination might suggest, by the cry of the patient that a great quantity of blood had passed away The membranes had ruptured, the bleeding had ceased, the "placenta" had disappeared, and the head was passing the perineum

After the birth of the child, I looked about the site of the *res gestæ* for an explanation of the deceptive feel, so simulating that of the placenta I found that the entire vertex had been covered by a disc of vernix caseosa, one third of an inch in thickness, of the appearance and consistence of leaf fat In the presence of Dr Clark, I placed side by side the maternal surface of the placenta and the disc of the vernix caseosa, the feel of the two was very similar Dr Clark had never encountered such an instance of superabundant vernix The upper parts of the arms of the child were so bedaubed with the sebaceous secretion as to remind one of the appearance of the spokes of a wheel on a muddy road The hæmorrhage came from a surface of detached placenta situated about an inch from the os uteri

DR E W SAWYER The great objection that Levret raised to laparotomy was the management of the placenta. He thought the hæmorrhage would necessarily be fatal, because there is no provision made by nature for the contraction and closure of the large vessels Thomas has enlightened the world greatly on that point, showing how the placenta should be managed Dr Janvrin, of New York, speaks of a case of extra-uterine pregnancy, with the head presenting so low that he was tempted to draw

the upper part of the left chest, and completely enveloped the great vessels The œsophagus was pushed to one side but not compressed The left lung was completely collapsed and contained numerous secondary nodules The heart was pushed down and back, but was normal The mesenteric glands were enlarged A section of the tumor showed largely fibrous tissue The reporter asked whether, in the case of such a large mass, the absence of pressure symptoms was not remarkable?

DR J B WALKER said that in the absence of pressure symptoms such a large tumor was, in his experience, unique, generally very much smaller ones giving rise to marked symptoms

CHICAGO GYNÆCOLOGICAL SOCIETY

Regular Meeting, Friday, June 24, 1887

THE PRESIDENT, CHAS WARRINGTON EARLE, M D, IN THE CHAIR

DR JOHN BARLEEN read the following paper, entitled *Several Items of Obstetrical Interest*

IS QUININE AN OXYTOCIC?

Some twenty five years ago, as well as my memory serves me, the question began to be mooted whether quinine was an abortifacient and oxytocic or not Prior to 1862, so far as I am aware, preparations of cinchona were given to pregnant women freely and without any suspicion that harm might result therefrom To day the profession is divided in opinion on this subject, some scrupulously withholding quinine from the pregnant woman, others giving it without reserve In the course of my reading, I have chanced upon an observation of Mauriceau's which indicates that two years prior to Sydenham's notice of the bark, this obstetrician had sought an answer to the query in question I quote Obs CCLXXII "On the 28th of October, 1680, I delivered a woman who had during a period of fifteen days three or four violent accessions of tertian ague, which obliged me, after a bleeding from the arm, to administer cinchona By the use of this remedy the fever entirely ceased After having continued in good health for ten or twelve days, she was happily delivered of a large healthy boy This experience caused me to recognize a fact, which has since been confirmed by a number of similar cases, to wit, that pregnant women can take cinchona with the same benefit as other persons, without its occasioning any injury to the mother or child "

I cannot but regard it as a curious and interesting fact that a question as to the specific action of a medicine put forth in 1680 should be *adhuc sub judice*

Last year I reported to this Society a case of

PLACENTA PRÆVIA IN WHICH THE PLACENTAL TISSUE EXTENDED OVER THE ENTIRE OVUM

Cases have been reported by Sirelius, Barnes, Hegar, Hicks, and Judell in which placentæ have been so spread out as to occupy nearly the whole of the internal surface of the uterus In connection with this subject, I call your attention to the following observation of La Motte's

Observation CCCCI—"The 22d of July, 1717, Dr Ducet sent to desire me to go to a farmer's wife, two leagues off, who had been in labor ten days and ten nights, during which time she had not the least rest" (La Motte here proceeds to describe how he delivered by turning and continues) "I had a great deal of trouble in bringing away the placenta, which was not one-third so thick as usual, but merely membranous, of about the thickness of a child's diaphragm, it not only adhered to the bottom of the uterus, but to its whole circumference, so that a young practitioner would hardly have believed that any placenta at all was left behind "

PLACENTA PRÆVIA WITH CERVICAL ATTACHMENT

In Charpentier's treatise on obstetrics, we find the following list of authors who admit that in certain cases of placenta prævia it is possible that the placenta find attachment within the neck of the uterus Sirelius, Barnes, Thudicum, Chavanne, Marchal, Thévenot, Keppler, Pajusko, Rokitansky, Sackreuter, Mettenheimer, La Chapelle, Pinard, Tarnier, Hubert, and Noel

I desire to prefix to this list the name of Andre Levret From his work, "L'Art des Accouchmens," I extract the following passage from his paper on Placenta Prævia published at Paris in 1751 Page 373 "An interesting question naturally arises in this connection, Why some women having the placenta adherent in the neck proper of the uterus arrive at term, whilst others, by far the majority, under the same condition do not reach the normal limit of gestation?

"This variation in effects proceeding from the same cause must depend upon some particular circumstance as a determinating clause I explain the matter in this way According as the placenta is primarily attached higher or lower in the neck proper of the uterus, hæmorrhage will occur sooner or later Thus when that vascular mass has taken root nearer to the os tincæ, the woman will be able to approach nearer to the term of gestation than if it had been implanted as high as the constriction (internal orifice) of the uterine neck And thus the time of interruption of the pregnancy by bleeding will vary with the level of attachment of the placenta between the two extremities of the neck It is demonstrated as well by the mechanism of pregnancy as by the daily experience of the accoucher, that the neck does not begin to expand to aid in augmenting the capacity of the uterus except in the later months of gestation, and that it is by segment that the cervix continues thereafter to expand from above downwards Now, the neck cannot thus expand without sooner or later obliging the placenta, which is not susceptible of like expansion, to detach itself in part, either in some point of its circumference if it be more advanced upward on one side than on the other, or at its centre if this be in exact correspondence with the upper end of the cervical canal It follows then as a necessity that a hæmorrhage shall occur at a time more or less near or more or less distant from the natural term of pregnancy, according as the placenta shall be at-

as usual This arrangement is so that when the bed is folded on itself all the ordinary obstetrical operations can be performed with ease, as the bed is now the heighth and length of the usual operating table A woman is brought into the lying in chamber when the os uteri is well dilated, if she is a primipara, if a multipara she is brought in somewhat earlier If time is permitted, she has a carbolic acid bath before being brought into the lying in room The bed clothes are used only once During the early stages the woman is left to do about as she pleases, but no unnecessary examinations are made and *never* until the hands are thoroughly disinfected A vaginal injection is given about the time the head begins to press against the perineum, and as soon as the vulva begins to open the spray is turned on to the parts and kept constantly going until after the completion of the third stage During the latter part of the confinement the attending physician is busy making all manner of measurements of the abdomen and pelvis He also listens carefully to the fœtal heart sounds, from which he decides in regard to the advisability of hastening the labor The placenta is always expressed, and the fingers or hands never passed into the vulva unless absolutely necessary

The immediately delivery, with all its details, is done by a midwife, and no pulling or tugging or dilating of the os or perineum is attempted at any time The parts are frequently washed, and the occiput made to hug the pubic arch by pressing the head up, the tissues of the perineum being between the hand and the head

If a rupture is threatened, the parts are supported by the extended hand and the edge reinforced, if I may use the term, by drawing down more tissues The cord of the child is tied by passing around it a little rubber tape, and the child is removed from its mother to be weighed, then washed, and measured in every part of its little body, length, breadth and thickness, head, thorax, pelvis and legs But very little, if any, ergot is given to the mother, and in the course of a few hours she may be seen in the general ward, with her baby in a little cot by her side

The operating room in this hospital is about fifty feet square The temperature is raised from 80° to 100° F, and for twenty four hours previous to a large operation sulphur is burning in the room All clothes and linen to be used about the patient are fumigated and placed in closed baskets Instruments are boiled in a ten per cent solution of carbolic acid and then soaked in a seven per cent solution Inside of the raised seats is the operating table The floor is of stone Upon one side is a pile of disinfected linen Next to it, a table containing hæmostatics, next, one upon which all kinds of restoratives are placed, with a hypodermic syringe filled with brandy or ether ready for use In a remote corner is a receptacle to receive all soiled clothes Upon the other side of the operating table are all the instruments in trays, and a battery for emergencies is in a convenient position At one end of the room are two or three places for washing, around which the director of the clinic and his assistants are seen for some time previous to the operation scrubbing their arms and hands and cleaning their nails Two or three instruments for spraying are placed in an appropriate position, and are worked during the entire operation It was here that I saw

A CÆSAREAN SECTION IN WHICH BOTH MOTHER AND CHILD WERE SAVED

The operation was delayed until the *os uteri* was fairly dilated The operating room had been thoroughly prepared and the woman properly disinfected An anæsthetic was given and the abdomen repeatedly disinfected, even the hairs along the median line being plucked out The incisions through the abdominal walls were the usual ones, the only additional procedure being that a thread was passed through the tissues at the upper and lower end of the abdominal opening The peritoneal covering of the uterus was incised and dissected back about one-third of an inch, so that a small piece of the uterine wall could be removed and the peritoneum folded over the end The position of the placenta was carefully ascertained and an opening made into the membranes surrounding the child, and the feet seized and the child extracted It was given at once to a nurse for resuscitation, who shook it violently, its head hanging downwards The placenta was now taken out of the uterine cavity, and carbolized water was used in great quantities The incision through the walls of the uterus was very carefully closed with interrupted sutures, then a layer less widely separated, and to keep this secure the chief midwife sewed over and over with catgut sutures the peritoneum until it seemed absolutely impossible for anything to get into the abdominal cavity from the uterus or from the abdominal cavity into the uterus The external wound was closed by the usual method Neither cotton batting nor any other of the usual dressings were applied on the outside, but a flat bag of shot, weighing from two to six pounds, was laid on the abdomen Drainage through the vagina ice, over the hypogastrium, the woman made a good recovery

I had the opportunity of examining this woman's pelvis a few days before the operation I could feel very plainly the promontory of the sacrum, and should judge that the conjugate was about two and one-half inches The os was dilated to the size of a half dollar and craniotomy could have been well performed, but Chiara was intent on trying to save not only the mother's, but also the child's life He succeeded in doing both

None of the grave complications which are dreaded were present in this case The hæmorrhage after the incision through the uterine peritoneum was very slight, and after the extraction of the child only a moderate amount of blood was lost After the wound in the uterus was closed, friction was made over the organ till it was firmly contracted, the abdominal opening was then closed as I have stated My notes do not state whether or not a rubber cord was placed around the uterus at the supra-vaginal junction

EXTIRPATION OF THE SPLEEN

This abdominal tumor was supposed to be ovar-

ian Usually a diagnosis is made by tapping and the fluid examined by the microscope, but in this case the precaution was not taken Upon opening the abdomen, the tumor was found to be a cyst of the spleen filled with echinococci These were thoroughly scraped out, the cavity cleansed, and the edges of the cyst stitched to the abdominal walls A glass drain was placed at the bottom of the wound, and it was thoroughly washed out with bichloride and dressed with iodoform, and the woman made a good recovery

(*To be concluded*)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Stated Meeting, October 12, 1887

THE PRESIDENT, J SOLIS-COHEN, M D, IN THE CHAIR

DR CARL SEILER read a paper on

CHRONIC RHINITIS AS AN ETIOLOGICAL FACTOR OF ACNE OF THE FACE

For a number of years I have made the observation that acne vulgaris and acne rosacea co existed frequently with chronic rhinitis, and particularly with the atrophic form of nasal catarrh, but it is only lately that I have come to the conclusion that this form of nasal disease is in many cases of acne the exciting cause This conclusion may seem far-fetched and perhaps unreasonable at first glance, but I hope to be able to show that there is undoubtedly a close connection between the two affections For this purpose I will give a short history of a few of the cases which have come under my observation, before entering upon a theoretical discussion of the connection between chronic rhinitis and acne

Case 1—J H, aged 38 years, a broker by profession, consulted me for chronic nasal catarrh He stated that he had suffered from stoppage of the nose for several years, and that every morning he blew out large scabs After this his nose felt clear but dry, and he had lost the sense of smell to a very large degree For two or three years he had noticed a redness of the external integument of the nose, which had become gradually worse, so that at the time I saw him it had spread from the nose to the cheeks, and pimples had made their appearance The rest of his face was free from pimples or redness On inquiry as to his habits, he said that he had always been a total abstainer from alcohol in any form, and the redness of his nose was the more annoying to him, as it gave rise to jocose remarks on the part of his friends His general health was good, and there were no symptoms of gastric disturbance

On examination, I found the anterior nasal chambers filled with dry scabs of hardened mucus, and having removed them, saw the mucous membrane below them was unusually pale, both on the septum and over the turbinated bones The lower turbinated bone was barely projecting from the wall of the nose, and the turbinated cavernous tissue apparently absent, as no impression could be made by pressure with the probe This condition caused the anterior chambers to be abnormally large, so that the posterior wall of the naso pharynx could easily be illuminated and viewed through the nostrils Irritation with the probe produced but a very slight amount of moisture to gather around the spot touched, while the whole of the mucous membrane was abnormally dry There was no odor

The treatment consisted in cleansing the nasal cavities morning and night with an alkaline wash, and in stimulating the mucous membrane with dilute nitrate of silver in powder, a small quantity of which was blown into the nostrils two or three times a week In order to keep up the stimulation a tampon of cotton was introduced into the anterior nasal chambers placed against the side of the nose, in place of the atrophied inferior turbinated bone, which tampon was renewed by the patient after the cleansing morning and night As an application to the skin I prescribed a lotion consisting of alcohol and precipitated sulphur, to be applied every night with a tuft of cotton, and to be washed off in the morning with soap and water

Under this treatment the acne gradually diminished, and the mucous membrane of the nose became again bathed with secretion, until after a little over three months the redness had entirely disappeared, and the cotton tampons could be dispensed with, because the lower turbinated bones, or at least the cavernous tissue, began again to project into the lumen of the anterior nasal chambers I saw the patient again three years later, unfortunately without having an opportunity of examining his nose, but he told me that there had been no return of the acne, and that his nose troubled him but little, and then only when he neglected to use the alkaline wash, the sense of smell had also returned to a large degree, but was not as acute as he might wish

Case 2—A L, aged 20 years, machinist, from Wilmington, had had scarlet fever when 10 years old, and since then had suffered from nasal catarrh At about the age of puberty pimples began to appear on his face, which gradually became larger and more numerous, until, when I saw him, his face and even neck were covered with various sized pustules in different stages of development In the free spaces between them comedones were numerous, and at the angles of the jaw and on the neck were large scars, forming pockets in some instances, caused by confluent acne pustules His general health was good On examination, I found practically the same condition of things as in *Case 1*, except that a disagreeable odor was present, and a perforation of the septum existed This latter circumstance led me to inquire for syphilitic infection, but I could not elicit anything pointing to the existence of even a taint, but found that he had been in the habit of picking off the scabs of hardened mucus from the lower portion of the septum with his fingernail, and had thus gradually scratched a hole into the cartilaginous partition

Having at that time a suspicion of the connection

between atrophic rhinitis and acne, I directed, for the sake of experiment, the treatment solely to the nasal chambers, and intentionally made no applications to the acne pustules The treatment in other respects was the same as that adopted in *Case 1* On account of the distance of the patient's home from the city, I saw him but seldom, and it was several months before much improvement was noticed However, in the course of about eighteen months the acne had disappeared entirely, as had also the comedones, and the chronic rhinitis had so far yielded to the treatment that the patient considered himself cured

Case 3 —Miss E S , aged 22 years, school teacher, general health moderately good, has felt a stoppage of the right nostril for some years, while the left nasal chamber was free but very dry, so that she had to use cosmoline or cold cream every night before she felt at all comfortable In the morning she occasionally expelled a small scab of dried mucus of a yellowish green color On her face were numerous pimples and comedones, but distributed more largely on the left side When asked, she stated that the pimples had made their appearance two or three years ago, had always been more numerous on the left side of her face, and did not seem to have anything to do with her diet, as she had, at the advice of her physician, abstained from various articles of food for considerable periods of time, without apparently producing any effect upon the acne Her monthly periods did not seem to her to produce any increase in the number of the pimples

An examination of the nose proved this to be one of those cases which are occasionally met with, in which we find an atrophic condition on one side coexisting with a hypertrophy of the turbinated cavernous tissue on the other The left nasal chamber being abnormally large, its mucous membrane pale and dry, and the lower turbinated bone hardly visible, presented the same characteristics as described above, and for this condition the same treatment was adopted, viz , stimulation with nitrate of silver and powder, and the cotton tampon after the dried secretion had been removed The other nasal chamber presented the well-known features of the hypertrophic nasal catarrh, with its injected mucous membrane, from which a copious flow of secretion is poured at the slightest irritation, its projecting turbinated tissue which obstructs the lumen of the lower meatus, and its frequent projections, from the septum Here an entirely different treatment had to be adopted, which it is needless to describe here in detail, in fact, the two sides of the nose were treated as though they were two separate and distinct cases, the one an atrophic, and the other one of hypertrophic rhinitis The sulphur and alcoholic lotion was used in this case, as it was important to the patient to get rid of the acne as soon as possible, which happy result was accomplished in a remarkably short time, to her great delight

The above short notes of three cases will, I think, suffice to show that there is a connection between atrophic rhinitis and acne of the face Although a large number of such cases could be cited to demonstrate still further this point, I think it would be waste of time to do so, as they are all more or less a repetition of each other

According to the statements of the different authors on skin diseases, acne occurs with equal frequency in both sexes, and usually makes its appearance at the time of puberty, and is frequent until the age of 30 As predisposing causes are mentioned, gastric disturbances, either lack of or excess of sexual connection, onanism, insomnia, and intemperance, but no mention is made, in any of the works to which I have had access, of atrophic rhinitis as a predisposing or existing cause That the sexual organs have a great influence upon the production of the disease cannot be doubted, for many cases are cited in which acne showed itself only during pregnancy, or at the menstrual period, in women, and it disappears with the cessation of the practice of self abuse in boys and men, also, the fact that it is most frequent at puberty, would point in that direction Some authors lay so much stress upon this that they direct their treatment altogether to the sexual organs, by passing a bougie into the male urethra, and prescribing vaginal douches and medication, having no faith in local applications to the skin of the face

Speaking of the pathology of acne Veiel says "The cause of the inflammation is the mechanical irritation by the inspissated secretion, the latter again is due to deficient glandular activity, because, owing to the defective elaboration of sebum, the secretion has time to dry in the efferent duct " Berend explains the new formation of acne efflorescence by assuming that the swelling of the inflammatory areola around the acne pustules and nodules, occludes the efferent channels of neighboring glands Similar views as to the pathology of the disease are expressed by others It would seem, therefore, that two factors must act in conjunction with each other to produce acne, the one to act as an obstruction to the efferent channel of the sebaceous glands by the introduction of dirt into it, and the drying of the secretion behind it, producing the so called comedones, and also a diminution in the activity of the gland itself, which causes an alteration in the consistence and quantity of the secretion, which thus is not able to remove the foreign body in the mouth of the duct by pressure from behind, as undoubtedly occurs in the healthy skin Thus the retention and accumulation of the secretion causes by pressure a localized inflammation, which is finally relieved by the formation and evacuation of pus In acne rosacea, the rarer form of the disease, we find no formation of pustules, but simply a general more or less diffused inflammation, which is probably due also to a perverted action of the sebaceous glands, but does not lead to a retention of the secretion

I have not been able to find an opinion expressed in any of the books as to the direct cause of the glandular irritation, whether it is altogether local, and caused by obstruction of the duct in the formation of comedones, or whether it is due to reflex nervous irritation, or finally is produced by a more

or less general disturbance of the capillary circulation in the skin of the face The first of these propositions may be at once set down as insufficient to explain the pathological condition, for comedones are frequent in almost every face without being necessarily accompanied by acne The other two propositions may be considered together, for we cannot have inflammation without disturbance of the circulation, and no disturbance of the circulation without nerve influence

The above cited predisposing causes clearly indicate that an irritation of the nervous system must exist somewhere, be it in the mucous membrane of the stomach or in the sexual apparatus, which, by reflex, acts upon the easily influenced capillary circulation of the skin of the face and neck, and thus by causing a change in the capillaries around the sebaceous glands causes a perverted action of these glands if it is kept up for any length of time, or if no relief from blood-pressure is afforded It is my belief that the cavernous tissue covering the turbinated bones provide such a relief, and that this is one of the functions of the erectile tissues of the body This belief is strengthened by the fact that under mental excitement which causes blushing of the face, the cavernous tissue in the nose swells up, while on the contrary, any emotion which causes paling of the face, the erectile tissue of the turbinated bones becomes paler, and diminishes markedly in bulk, facts well known to every laryngologist Let this cavernous tissue be absent, or greatly diminished, as is the case in atrophic rhinitis, and very little or no relief is afforded for the excessive blood pressure in the capillary circulation in the skin of the face, and the result will be acne if any of the predisposing causes be present In the cases above cited, and in many others under my observation, the acne disappeared *pari passu* with the reformation of the cavernous tissue, and thus these would seem to be of some importance as clinical proofs of this theory

I am fully aware that a single line of cases observed by one observer, are by no means a sufficient guarantee for the acceptance of a theory, and it will require many more cases observed by many ob servers, to prove or disprove it At the same time I cannot but think that atrophic rhinitis may be one of the etiological factors of acne

DR C M SELTZER said I wish that the author had been more explicit with reference to the dietetic treatment of these cases I infer from his remarks that the majority of his patients have been underfed Most of the cases that I have observed have had an excess of nitrogenous articles, with a lack of sufficient vegetable food I have obtained the best results by limiting the quantity of nitrogenous food, especially in children, and by increasing the quantity of butter, cream, and fatty articles I give light suppers, secure abundant sleep, and moderate exercise, especially in gymnastics Treated in this way, but little medicine is required

FOREIGN CORRESPONDENCE

LETTER FROM VIENNA

(FROM OUR OWN CORRESPONDENT)

Sixth International Congress for Hygiene and Demography in Vienna

The opening ceremony as well as the first general meeting in connection with the Sixth International Congress for Hygiene and Demography was held in our metropolis on the 26th of September, at 11 o'clock A M , in the nicely decorated "Musikvereins saal " Among the distinguished *savants* who were present there were specially to be noticed Virchow, of Berlin, Brouardel, of Paris, Pettenkofer, of Munich, Spencer Wells, of London, etc The Patron of the Congress, Crown Prince Rudolphus, opened the Congress, which was then addressed by its President, Prof Ludwig He emphasized in his eloquent speech the progress which hygiene had made of late years, as only ten years had elapsed since the International Health Congress of Brussels, the Congresses at Paris, Turin, Geneva, the Hague and Vienna rapidly succeeded The fact that numerous distinguished scholars from almost all the civilized countries of the world had gathered with the purpose of partaking in the deliberations of the Congress was a proof of the recognition of the high importance of this science, a matter which naturally could be easily understood, as hygiene and demography had made it their task to protect mankind against the social evils which, particularly in our century, threatened them to so high a degree His Imperial Highness had given the Congress a special importance and facilitated its work to a great extent, and taking into consideration the preparatory works of the present Congress, and especially the high scientific position of many of the persons who took part in it, we had every reason to entertain the hope that its works would be crowned with much success

The Crown Prince said he considered it an honor and a pleasure to have charged himself with the patronage of the Sixth International Congress for Hygiene and Demography The most precious capital of the State and society was man, each human being represented a certain value, and to preserve man intact for his whole life was not only a command of humanity, but also the duty of all the communities in their proper interest The participation of so many illustrious persons of all nations and from all countries in the present meeting was an evidence of the vast international importance of hygiene, and he was much satisfied to be able to salute them in this city, which was a centre of lively scientific work and earnest investigation

After Dr Kohler, Director of the German Sanitary Board, and Prof Brouardel, of Paris, had saluted the Crown Prince and the Congress in the name of the countries they represented, the eminent French scholar delivered his lecture on the different modes of the spread of typhoid fever, which contained numerous features of a great interest and a high importance He successively discussed the different vehicles of the typhoid germ, and treated the influence of the drink-

ing water and the air on the spread of typhoid epidemics at full length There was no doubt that the drinking water played the chief part in the spread of epidemics of typoid fever, and ninety cases out of a hundred were due to this way of propagation This influence of the drinking water was a fact beyond any doubt, and confirmed by innumerable direct observations as well as by the results of the bacteriological researches Among the various examples of direct observation which the author cites for proving the correctness of his assertions, he refers also to the conditions of the water supply of Paris The water which supplies this city is furnished by different springs The Dhuys and the Panne supply the city of Paris with excellent water, but, at certain times, the Marne, the Seine and the canal of Ourcq must be resorted to, owing to the want of a sufficient quantity of water for the city There is, however, a great difference as to the salubrity of the water which is supplied by the Dhuys and the Panne on one side, and that of the now mentioned rivers on the other side, as these are usually polluted by the dejections of those who live near the rivers and by the seamen The consequences of the use of these different waters in regard to the propagation of typhoid fever became evident in 1886, when, on the 20th of July, they began to use in Paris the auxiliary water supply, owing to the insufficiency of the regular one During the week of July 18–24, 40 persons affected with typhoid fever had been admitted into the hospitals of Paris, from August 1–7 the number increased, and reached 150 When the auxiliary water-supply was discontinued, on August 7, the number of persons affected with typhoid fever rapidly decreased, and from the 15th to the 21st of August only 80 such patients were admitted into the hospitals

The following example was still more striking Dr Régnier, of Paris, had noted the rate of mortality for the year of 1882, in the different caserns of Paris, and could state with all certainty that the new and well constructed casern of Château Landon presented a percentage of mortality (typhoid fever) which amounted to 17 per cent The soldiers of this casern had drunk water which derived its origin from the Marne and which was not filtered In the old casern of Jean Jacques Rousseau, however, the soldiers had drunk water which had been furnished by the Panne, and the mortality amounted here to $\frac{1}{10}$ per cent For 1886, in the casern of Château-Landon, the water of the Marne was substituted for that of the Dhuys, and the mortality of typhoid fever sank, and amounted only to 2 per cent Only two caserns of Paris were still subjected to typhoid fever epidemics, viz those supplied with the water of the Seine

In discussing the results of the bacteriological investigations as to the influence of the drinking water on typhoid epidemics, Prof Brouardel remarked that after the bacillus of typhoid fever had been discovered by Eberth, this microorganism was found in all cases in which persons had been affected with this disease, and missed in all those cases where no typhoid affection was present This fact had also been confirmed by Koch, Gaffky, Cornil, Babès and other investigators, and there was at present no doubt, either from our direct observations or from the results obtained in the microbiological researches, that the drinking-water was really, and in most of cases, the agent for the propagation of the disease under consideration The air which we breathed was also a vehicle for the spread of the typhoid fever, as became evident from the numerous striking examples which the distinguished French hygienist quoted in this direction, and as to the propagation of the disease by means of the polluted dresses or the hands of the nurses, he did not wish to insist upon this fact, as it was known to all of us, this influence, however, had the least importance of all In hygiene, concluded Prof Brouardel, we ought also to have the courage of deriving practical conclusions from the scientific facts, and taking into account the fact that out of 100 patients affected with typhoid fever, 90 suffered from this disease owing to the use of infected drinking water, our duty was to supply our whole population with clean and sound water, which was easier for us than if we were to prevent the air from licking up the infected dejections

Prof Pettenkofer, of Munich, insisted, in a lecture which was received with much applause, upon the necessity of the teaching of hygiene in the universities and the technical schools There were chiefly three classes or professions which had to cultivate hygiene, viz in the first place the physicians, and besides them, the architects and the engineers, the officers of the public administration, however, had also to recommend an hygienic education The more these classes will be instructed in hygienic questions, the more everything practical would be done for the welfare of mankind The lecturer often alluded to the English conditions, and mentioned, among other things, that what the English called "comfort" had an hygienic importance and was worth being imitated In the seventeenth century, when London had not yet a million of inhabitants, the average mortality was 49 per mille, whereas now, though more than four millions of people were living in the city, its mortality was only 21 per mille, a fact which was due only to the hygienic measures which had been taken by the English and which were strictly observed During the war in the Crimea, 95,240 French soldiers out of 309,000 who had gone into the war, died—almost the third part of the army, out of this number, 20,000 died from their wounds, whereas 75,000—almost four times as many—succumbed to various diseases, without having been wounded It was shown that the English had no better lot, the war in the Crimea, however, had caused the English hygienist, Parkes, who had taken part in the whole campaign, as a military physician, to give the hygiene an official position in the administration of the army, and it was on his proposal that the Army Medical School at Netley was created, in which hygiene formed an important part of the curriculum The other States followed the same example, and fifteen years after the war in the Crimea, in the Franco German war, the valuable results of these measures could clearly be observed The total losses of the German armies during that war were 40,888,

out of these 28,282 died from wounds, 346 from other accidents, and 12,282 from various diseases Whereas in the war of the Crimea, the proportion of the losses in the army which were due to the arms of the enemy, in comparison with those due to diseases, was 100 375, the proportion in the Franco-German war was 100 43, *i e*, eight times the more favorable This difference in the mortality, said Prof Pettenkofer, was chiefly due to the hygienic conditions which were adopted in the army, by which numerous cases of abdominal typhoid fever and dysentery were avoided

The sessions of the four hygienic Sections and of the demographic Section began on the next day, and lasted a whole week The most important of the reports and discussions were those bearing on cholera, rabies, and anthrax

Professor Billroth has fully recovered from his late illness, and has begun his course of lectures in the General Hospital L L

MISCELLANEOUS.

THE AMERICAN ASSOCIATION FOR THE CURE OF INEBRIETY will hold its Semi Annual Meeting at the Turkish Bath Hotel, Columbia Heights, Brooklyn, N Y , Nov 9, at 12 M The following is a list of the papers and addresses to be read The President's Address on "The Responsibility of the Inebriate," will be delivered by Dr Joseph Parrish, Burlington, N J , "Report of the Colonial Congress on Inebriety," in London, England, by Dr T Crothers, Hartford, Conn , "The Pathology of Inebriety," by Dr Norman Kerr, London, England, "The Physiology of the Drink Impulse," by Dr J T Searcy, Tuscaloosa, Ala , "Cocaine Toxemia," by Dr J B Mattison, Brooklyn, N Y , "The Power of Alcoholic Influence," by Dr T L Wright, Bellefontaine, Ohio, "Turkish Baths in Inebriety," by Dr C H Sheperd, Brooklyn, N Y , Hygiene in the Treatment of Inebriety," by Dr Albert Day, *Boston, Mass* , "Report on Asylums for Inebriety in New Zealand and Australia," by Dr D McGregor, *Gov Inspector, New Zealand*, "Sexual Insanity in Inebriety," by Dr T D Crothers, Hartford, *Conn*

WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY —At the last meeting of this Society the following officers were elected for the ensuing year President—Samuel C Busey, M D,, Vice Presidents—D W Prentiss, M D and W W Johnston, M D , Treasurer—Geo Byrd Harrison, M D , Recording Secretary—Samuel S Adams, M D , Corresponding Secretary—C Wythe Cook, M D

VACCINATION FROM THE BUFFALO —The experiment has been tried in the Lahore district, India, during last year, of vaccinating from a young buffalo, instead of from a cow, and the results are said to have been "in every way satisfactory"

NEW BOOKS RECEIVED

Manual of Clinical Diagnosis By Dr Otto Siefert and Dr F Müller Third edition revised and corrected by F Müller Translated by W B Canfield Illustrated New York G P Putnam's Sons

Druitt's Surgeon's Vade Mecum Edited by Stanley Boyd Philadelphia Lea Bros & Co

Transactions of the State Medical Society of Wisconsin, 1887

Treatise on Human Physiology, for the use of students and practitioners of medicine By Henry C Chapman, M D , Prof Institute of Medicine and Medical Jurisprudence, Jefferson Medical College Philadelphia Lea Bros & Co

Syphilis By Jonathan Hutchinson, F R S , LL D With Chromo Lithographs Published by Lea Brothers & Co , Philadelphia

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U S ARMY, FROM OCTOBER 22, 1887, TO OCTOBER 28 1887

Major Chas R Greenleaf, Surgeon, will proceed from this city to the places hereinafter named, in the order in which they are named, for the purpose of investigating the methods of examining recruits at the depots and rendezvous located thereat, and of instructing recruiting officers in matters pertaining to such examinations Baltimore, Md , Philadelphia, Pa , Camden, N J , New York City and Davids Island, N Y , Boston, Mass , Portland, Me , Albany and Buffalo, N Y , Cleveland, O , Detroit, Mich , Chicago, Ill , Milwaukee, Wis , St Paul, Minn , Jefferson Bks and St Louis, Mo , Cincinnati and Columbus, O , and Pittsburg, Pa S O 248, A G O , October 25, 1887

Major P J A Cleary, Surgeon, ordered to proceed from Ft Huachuca to Ft McDowell and report to the commanding officer for duty as Post Surgeon S O 111, Dept Ariz, October 10, 1887

Capt Chas Richard, Asst Surgeon, granted leave of absence for one month, to take effect when his services can be spared by his post commander S O 247, A G O , October 22 1887

Capt H G Burton, Asst Surgeon, ordered from Plattsburg Bks , N Y , to Watervliet Arsenal, N, Y

Capt J C Merrill, Asst Surgeon, ordered from Watervliet Arsenal, N Y , to Frankford Arsenal, Pa S O 249, A G O , October 26, 1887

First Lieut Nathan S Jarvis, Asst Surgeon, ordered for field duty in Dept of the Platte S O 246, A G O , October 21, 1887

First Lieut Nathan S Jarvis, Asst Surgeon, ordered from Dept Platte to Dept Mo , for duty in the field. S O 249, A G O , October 26, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING OCTOBER 29, 1887

Medical Inspector N L Bates, ordered to hold himself in readiness for orders to the "Trenton"

Asst Surgeon F A Hesler, ordered to examination for promotion

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDING OCTOBER 29, 1887

P A Surgeon Bailhache, to proceed to Buffalo, N, Y , Erie, Pa , Ashtabula, Cleveland, Sandusky and Toledo, O , as inspector October 4, 1887

Surgeon C S D Bessenden, detailed as chairman of Board for the physical examination of cadets, Revenue Marine Service. October 15, 1887 To proceed to Cape Charles Quarantine Station as inspector October 26, 1887

Surgeon H W Sawtelle, detailed as chairman of Board for the physical examination of officers, Revenue Marine Service October 27, 1887

P A Surgeon Fairfax Irwin, to inspect unserviceable property at Boston, Mass , and Portland, Me , to proceed to Vineyard Haven and New Bedford, Mass , as inspector October 8, 1887

P A Surgeon F W Mead, detailed as recorder of Board for the physical examination of cadets, Revenue Marine Service October 15, 1887

P A Surgeon J H White, leave of absence extended four days October 21, 1887

Asst Surgeon P M Carrington detailed as recorder of Board for the physical examination of officers, Revenue Marine Service October 27, 1887

Asst Surgeon J B Fattic, granted leave of absence for seven days October 28, 1887

Asst Surgeon W J Pettus, when relieved at *Savannah*, Ga , to proceed to Galveston, Tex , and assume charge of the Service October 17, 1887 Granted leave of absence for thirty days October 21, 1887

Asst Surgeon J J Kinyoun, granted leave of absence for fifteen days October 19, 1887

THE

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ORIGINAL ARTICLES.

TUBAL PREGNANCY, WITH SPECIMEN OF CASE.

Read in the Section on Obstetrics and Diseases of Women, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY C R REED, M D,

OF MIDDLEPORT, OHIO

The recent advances in abdominal surgery have given the subject of tubal gestation a new interest to the profession Before this advance in the treatment of extra uterine pregnancy, a diagnosis of ectopic gestation was followed by a prognosis equivalent to a death warrant to the unfortunate woman who was the subject of a misplaced embryo Under the title "Tubal Pregnancy," (and Mr Lawson Tait says "all cases are tubal in their origin") we include tubo ovarian, tubal, tubo uterine or interstitial, and abdominal, as practically these distinctions are of little importance We will not stop here to discuss the causes of ectopic gestation, as it is well known that if the ovum in its passage from the ovary to the uterus comes in contact with healthy spermatozoa, it is there impregnated, and fixes its habitation and commences its growth If fecundated while in the ovary or after it reaches the uterine cavity, it has room to grow to a mature fœtus, but if it meets the fertilizing element while in its narrow road, and loiters, it fixes its abode there, and while it has the power to appropriate the material or food necessary for its life and growth from the tissues surrounding it, it has not the faculties of reason and judgment to provide for the future by enlarging its home, as its growing needs require, and it violently assails and destroys its hostess

The proportion of extra to intra uterine pregnancies is given by Bandl as but one in 12,000, while Alexander Simpson states that many cases of hæmatocele associated with one or two months amenorrhœa are really extra uterine fœtations Many cases of sudden death in women from two to six months pregnant, are attributed to cardiac diseases, in which an autopsy would reveal Fallopian rupture from tubal gestation Mr Tait[1] states that he has known of twenty post mortem examinations of women who died from ruptured tubes Two have recently occurred in this vicinity, and I am of opinion that the anomaly is more frequent than heretofore believed

[1]Diseases of the Ovaries and Oviducts

Without an ante- or post mortem abdominal incision there is no way of demonstrating the existence of tubal pregnancy, the certain *proof* is wanting, in most cases there are but the usual symptoms of normal gestation until pain, shock and prostration occur, or what Barnes calls "abdominal shock and collapse" The gravity of the symptoms will depend on the extent of the rupture and amount of the hæmorrhage, if the latter is great, there is coldness of the surface, extinction of the radial pulse, pallor of the surface, whiteness of lips, tongue and conjunctiva, great muscular prostration while the mental faculties are preserved If the woman rallies from the shock, or death does not occur in the cold stage, then follow general peritonitis, with tympanites, and abdominal tenderness on pressure, dorsal decubitis, thoracic respiration, nausea and vomiting, high temperature, rapid and feeble pulse, septicæmia and death If the peritoneum is not ruptured, and the cyst passes into the folds of the broad ligament, hæmorrhage may be arrested, and but slight, the symptoms subside and the patient apparently recovers, but unless the embryo dies, it will continue to grow and a new danger awaits the doomed woman In the tubo ovarian form the pregnancy may continue to term, the fœtus dying is converted into an adipocire or a lithopœdion and may be retained an indefinite period, in one instance fifty six years Inflammation and suppuration may occur around the fœtal cyst, and it may be discharged through the walls of the abdomen, the vagina, the bladder or bowel The stage of gestation at which rupture takes place may vary from two weeks to several months, depending on the location of the cyst Rokitansky gives an instance of rupture in two weeks, and the average in tubal and tubo-uterine is probably two months

There are no pathognomonic symptoms, and the diagnosis is usually obscure Many of the prominent symptoms have been given in the history of the anomaly, and need not be repeated here If called to see a woman during the child bearing period, who has been suddenly attacked with pain in inguinal region or lower part of abdomen, attended with the usual symptoms of severe hæmorrhage, as shock, cold surface, clammy perspiration, absent radial pulse, pallor of lips, tongue and conjunctiva, and absence of external hæmorrhage with mental faculties intact, and on inquiry learn that she has missed one or more menstrual periods, that her breasts have been enlarged, and irregular enlargement of abdo-

men, with the ordinary attending nausea and vomiting, and without other means to account for her sudden illness, it may be presumed that she had extra-uterine pregnancy, that the tube was ruptured and severe hæmorrhage had taken place, and the subsequent history will confirm the diagnosis The presumption of ectopic gestation will be still stronger if the woman has been sterile for a number of years, for as stated by Tait, in his work previously referred to, "It is somewhat remarkable, and I think it is in favor of the views of the pathology of tubal pregnancy which I have advanced, that the majority of the instances of this abnormality occur in women who have not borne children previously, or in those who have had no children for many years This point in the history of the patient is therefore always noteworthy"

The prognosis, when gestation is attended by the above symptoms, is always grave Rupture of the fœtal cyst, with fatal hæmorrhage, in all cases of tubal pregnancy, may be expected at any period after six weeks or even one month In 500 cases collected by Parry rupture occurred in 174, or in 34 8 per cent Maygrier gives a table of fifty six cases of rupture followed by death, in only nine was the fatal result immediate, the deaths occurring from several hours to several days The prognosis is much more favorable under the improved methods of modern abdominal surgery With the expectant treatment as taught by Barnes and others up to within the past decade, the mortality was fearful, but now by prompt surgical interference, we may expect to save a large proportion The timid physician should not undertake the treatment of these cases, but call to his aid the bold, intelligent surgeon, in medicine alone there is no hope for the doomed woman, but in modern abdominal surgery she has a chance for her life

Treatment—The treatment of extra uterine gestation is curative, by the use of such means as will arrest the growth of the embryo or fœtus by destroying its life, as puncturing the sac and evacuating the liquor amnii, by injecting the sac with solutions of morphia, atropia, iodine, strychnia, etc , by passing a current of electricity through the embryo, all of these except the latter, we believe, have been abandoned, and of electricity Parvin says "Though the life of the fœtus be destroyed by electricity, the latter remaining in the abdomen of the mother may still be a source of disability, or even danger" The removal of the fœtus by elytrotomy or through the vagina has had its advocates, but is now abandoned for laparotomy or abdominal incision Thomas advises elytrotomy if the fourth month of gestation be passed and the tumor low down in the pelvis Maygrier takes the position that elytrotomy should not be done if the fœtus is living, but that laparotomy is preferable "In either operation the placenta should not be removed" Barnes[2] says "Lesouf has rightly said that every woman who has become the subject of an extra uterine gestation is doomed to more or less speedy death" This is eminently true of tubal gestation The question has often been discussed whether it is not advisable to perform gastrotomy with a view to removing the embryo and effused blood, and checking further bleeding by tying the Fallopian tube on the proximal side of the sac, and cutting away the sac I can hardly imagine that this idea will ever be successfully carried out in these cases of early tubal rupture In the first place, the greater number of subjects die within a few hours from the primary shock of the injury and hæmorrhage "Removal of the blood by gastrotomy must add to this shock, and cannot restore the lost blood I fear the actual state of science has no resource beyond the old one of rallying the patient from collapse by cautious administration of stimulants, of procuring rest by opium, and by controlling inflammation, if the patient survives until this conservative process sets in"

Later authorities in rupture of the cyst advocate immediate abdominal incision Parvin[3] says "The general practice is to endeavor, by external means, to arrest the hæmorrhage and sustain the patient" But in view of the recent successes of Mr Tait, who in less than three years has performed laparotomy in twenty one cases of tubal pregnancy immediately after rupture occurred, saving twenty women, it may be accepted that in all such cases, especially if grave hæmorrhage occur, the abdomen should be opened, the cyst, if possible, and its contents, with the clots, removed, the bleeding pedicle ligated, and the peritoneal cavity cleansed Mr Tait's success vindicates the position ably maintained by Stephen Rogers,[4] in 1867 This success, too, presents a striking contrast with the mortality of that expectant treatment Thomas states that in five cases of rupture of the sac, no operation being done, death occurred in four

Mr Lawson Tait[5] says "There are but two forms of misplaced conception In one the oviduct bursts, the peritoneum remaining uninjured, after which the ovum escapes into the broad ligament, between the folds of which its development continues In the other variety the peritoneum is lacerated as well as the walls of the tube, and the ovum finds its way into the cavity of the abdomen, and that tubal pregnancy may become intra peritoneal or extra peritoneal, just as the tube happens to burst The intra peritoneal termination is the more common, and the more fatal, while the extra-peritoneal development of the ovum is much rarer, less fatal, and far more amenable to treatment The class of cases which we see at the time of tubal rupture are generally included under the head of intra peritoneal hæmatocele I have very little doubt, however, that many of these cases would be saved by prompt action I have twice been on the point of performing abdominal section on account of suspected rupture of a Fallopian tube, and have been prevented by scruples as to the correctness of the diagnosis In both cases post-mortem abdominal section showed that the suspicion was correct, and I believe both

2 "Diseases of Women," 1873

3 "Science and Art of Obstetrics," page 314

4 "Trans American Medical Association," vol xviii

5 "Diseases of the Ovaries," 4th edition, written four years before the above quotation from Parvin

of these patients might have been saved A hesitation in opening the abdominal cavity was natural enough when we were overburdened with the superstition that it was a very serious step, but now that we know it can be done with perfect safety, I would not hesitate to explore in a case where I suspected a Fallopian rupture If my suspicions were verified I would apply a ligature to the rupture after I had completely emptied the sac, or I would completely remove the broad ligament, or perhaps stitch it to the abdominal wound and drain it, as I have done in pelvic abscess, etc In this way I think some of these terrible cases might be saved"

Mr Tait's recent successes, as quoted above from Parvin, verify his opinions as he predicted time and experience would The above quotations are inserted here, as they so well exemplify the following case

Mrs M, aged 37, mother of two children, youngest 14 years, of fine physique and health, was attacked on the afternoon of March 9, 1887, with pain in region of left ovary, with nausea and faintness, sufficient to confine her to bed until her usual bed time An effort to rise from bed would increase the pain and nausea As she had had similar slight attacks of pain the past ten days she thought little of it, and attributed the pain to ovarian neuralgia, to which she had been subject, and her husband being from home, did not send for a physician She had occasional pain during the night, but slept fairly well

On the following day, at 9 A M, I was called in haste to see her, as she was thought to be dying I found her pulseless at the wrist, her face, lips, tongue and conjunctiva apparently bloodless, surface cold, and about the only indication of life noticed was when I asked what was the matter She feebly responded she had a severe attack of neuralgia of left ovary, coming on when she arose from bed and was dressing She was a woman of much intelligence, with a good knowledge of anatomy and physiology On getting the above history of her case I said "Mrs M, you are having hæmorrhage" She answered, "No, I have had none" I asked if she had missed a menstrual period, she said, "One, and am near the next one"

Diagnosis—Tubal pregnancy with rupture of left tube and hæmorrhage into, probably, the peritoneal cavity She was given a full hypodermatic injection of atropia and morphia, she and her husband were told of the probable nature of her illness, and he was informed of a fatal prognosis and the necessity of immediate abdominal section, and consultants were sent for

At 1 P M she was again seen, in consultation with two physicians She had rallied slightly under the influence of the atropia, the morphia had relieved the pain, and there were indications of approaching reaction and a probable cessation of the hæmorrhage All of the counsel not agreeing in the diagnosis, an expectant course of treatment was adopted Stimulants and anodynes were given in small doses, large injections of hot water into the bowel by fountain syringe, which were retained and absorbed During the night of the 10th atropia, alcohol, and external heat were necessary to sustain animal temperature, and she barely lived through the night During the night there was slight hæmorrhage from the vagina, which did not recur An examination *per vaginam* was negative in results, *per rectum* indicated a large hæmatocele, or enlarged uterus, the latter proved correct

On the morning of the 11th condition slightly improved Radial pulse still absent, bloodless appearance, cold surface, mental faculties intact Same counsel Diagnosis large hæmatocele Treatment stimulants, anodynes, external heat, iced milk Prognosis more favorable

March 12, 8 A M Condition apparently improved, radial pulse now perceptible, 128, reaction, upper portion of abdomen resonant on percussion, lower dull or flat During the day abdomen became tympanitic and tender, peritonitis well marked with nausea and vomiting Treatment morphia hypodermatically, ice internally, calomel in small doses, and bismuth in large, to control vomiting, turpentine stupes over abdomen

13th Pulse 120, moderate force, paralysis of bladder and bowels, tympanites increasing, abdominal tenderness, nausea and vomiting, treatment continued, during the day vomiting ceased, iced milk and buttermilk were retained, calomel and bismuth discontinued

14th, 7 A M Pulse 124, less force, tympanites and tenderness continue, respiration thoracic, enemas of oil and turpentine moved the bowels freely, contents healthy, strength failing, mental faculties preserved

9 P M Mind wandering, strength failing, restless, breathing thoracic and shallow

15th, 5 A M Radial pulse absent, unconscious, died 8 A M, five days from the severe attack of pain and collapse

Autopsy, 16th, 8 A M, 24 hours after death On opening the abdomen in the median line from one-half to a gallon of fluid and clotted blood was found in lower abdominal and pelvic cavities The intestines were healthy, with no adhesions, general peritonitis, no decomposition of contents of peritoneal cavity After removing the blood search was made for the source of the hæmorrhage, on lifting up the left uterine appendages a rent was found in the Fallopian tube one inch from the uterus, a cyst nidus, the size of a common walnut (I present the specimen for examination) The uterus was large and erect, the right appendages healthy, these, with the uterus for reasons not necessary to state here, were not removed

Mrs M died, not directly from the loss of blood, but from its retention in the peritoneal cavity, exciting fatal peritonitis The details of this case are given, as I think it teaches a lesson A similar case, with specimen, was presented to the Philadelphia Pathological Society, Nov 12, 1885, by Dr Formad, and published in THE JOURNAL, Vol v, No 22, page 609 From the history of the above case, and the teachings of modern abdominal surgery, was the patient treated as the symptoms indicated? and did she have a fair chance for recovery? We answer, "No" We believe stimulants and an anæsthetic

should have been given, the abdomen promptly opened, the blood removed, the left appendages removed, the cavity cleansed, a drainage tube inserted, the incision closed, and Mrs M would have had at least two chances in three for recovery But other counsel prevailed, the expectant treatment was adopted, the old teachings of Barnes on tubal gestation, and Thomas on hæmatocele, were followed, and Mrs M 's life was a sacrifice to the ignorance and timidity of her physicians It might be said that in her collapsed condition operation would have been fatal Hot water should have been injected into the bowel, applied to the abdomen and extremities, the abdomen opened and the cavity irrigated with hot water, and she would have rallied from the shock On the third day, at the beginning of the peritonitis, there was sufficient reaction, and then, if not before, the operation should have been done

THE MEDICAL JURISPRUDENCE OF MENTAL AND NERVOUS DISEASES

Read in the Section on Medical Jurisprudence, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887,

BY S V CLEVENGER, M D,
OF CHICAGO, ILL.

Insanity may be regarded from three prominent standpoints the philosophical, the medical, and the legal How soon there shall be consonance of views depends upon when there shall be general recognition of what is known about mental diseases

Were the modern philosophical conclusions to prevail there would be no distinction between crime and insanity, society would simply adopt measures to protect itself against both as equally dependent upon faulty organization or function and more attention would be paid to circumventing the higher grade of criminals who seldom figure as such the demagogue, the social hypocrite, and the unscrupulous millionaire gambler It will be long before the populace comprehends that unjust judges, a Senate crowded with Neros and a feeble array of intelligence in the lower house can work more disaster than Bedlams and jails let loose, but the trend of enlightenment is toward mercy to the weak and protection against oppressors Dr Wm D Robinson, physician to the Eastern State Penitentiary of Pennsylvania, (in a paper read before the Philadelphia Neurological Society, March 28, 1887) says that the major part of state prison offenses were the acts of men born members of the crime class of people "They are one of the morbid excrescences from Society, and in progeny reproduce their peculiar kind As the cancer cell lodged in a neighboring gland develops a growth identical in make up with its paternal source so the offspring of the crime class belie not their origin

"These people very seldom reform, but in death end lives passed in crime and infamy They have absolutely as little control over their natural inclinations to wrong doing as the confirmed periodical drunkard has over desisting from his spree

"They really see very little moral wrong in their crimes—the crime with them being detection They truly believe that the man who assists in their detection and aids in their being brought under the law is much worse than themselves

"Crime is unquestionably a monomaniacal infatuation with them Statistics, attested facts and direct attainable evidence clearly warrants this assertion It is not an unusual case to have them acknowledge that they prefer the excitement of getting one dollar unlawfully to earning ten honestly"

Dr Robinson goes on to show that neurotic diseases, syphilis and defects of the cranial contents exist among them You are familiar with the disputations connected with the matter of responsibility in mental disease, and I will not trouble you with even a résumé thereof, but will ask your consideration of the philosophical view that criminality is madness

It is not so long ago in the World's history, that sickness of all kinds was regarded as a diabolical possession and among some primitive people attempts were made by harsh treatment of the patient to scourge away the evil When enough advance in reason had been made the sick were no longer held responsible for bodily ailments, but insanity was not regarded as depending upon any of the diseases to which mankind was subject, in fact it was not considered as a symptom of bodily disease at all

Finally, this concession was made, and mental disorders are in many countries classed as sickness for which the sufferer is not held to account, though in Illinois a jury still determines the extent to which a person is guilty of insanity, or, if we admit that the law recognizes insanity as a disease then a lay jury merely makes a diagnosis

Magnan and other pathologists, Crother and other clinicians, have demonstrated that many forms of inebriety depend upon defective organization Criminality and drunkenness being the product of structural faultiness it is as sensible to "punish" the sick as the malefactor

In sickness, insanity and criminality *discipline* is absolutely necessary, the delirium typhoid patient is prevented from leaving his bed and the rheumatic from eating unwholesome food In the better class of asylums the insane are promoted to better wards and more privileges as an inducement to cultivate self restraint, and this identical principle is operative to day in the Folsom (California) State prison where a graded system of fare is adopted for convicts according to their behavior

That Society is as yet unwilling to identify crime with insanity, on the grounds of inexpediency, does not disprove the identity and is paralleled by the inability of our ancestors to accord irresponsibility in mental ailments

Objections without number can readily be raised against a recognition of crime as insanity, one of the logical consequences of which would be the abolition of the penitentiary as a reformatory institution In considering this aspect of the question I would deny that reformation of criminality was accomplished by such imprisonment, and claim that the convict

who had served his term had merely graduated as a criminal, with of course here and there exceptions, which are such *in spite* of the system, the tendency of which is to confirm and to harden the convict The protection of the community, for the time being, that the incarceration affords, is obtainable through any method of sequestration and is no argument in favor of the brutalizing punishments resorted to

Legal gentlemen may laugh at this Utopian fancy, but let me tell them that penologists and alienists (who are not politicians) affirm that a large percentage of convicts are demonstrably insane from the standpoint of the layman, else why should there be a "crank department" in every such prison? I have known congenitally insane wretches to be forwarded to asylums after having been several years in prison with the statement that the lunatic had become so from the effects of imprisonment Paretic dements, who in the beginning of their mental breakdown often commit larcenies or outrages against decency are condemned as criminals and soon die in a convulsion or after a maniacal outbreak I have heard the question "What difference does it make, since death is inevitable, whether the patient die in the penitentiary or asylum?" The same might be urged in all cases in favor of an abolition of asylums and a return to the whipping, ducking and starvation methods of treating lunatics in recent centuries Besides, *ad hominem*, would it make no difference to your family that the truth had been recognized and you had been permitted to die as insane instead of as a convicted thief? The "insanity dodge" does not seem to have availed among poverty stricken culprits when we can recall so many grossly insane patients converted into convicts A pauper suffering from katatonia stabbed his wife in the most insanely brutal manner, exhibited all the peculiarities of that disease while in jail, but the political alienists and the jury forwarded him to the penitentiary where he was placed in the "crank department" A sixteen year old girl with hysterical insanity who attempted to poison her parents was also pronounced sane and sent to the same place, a paranoiac with *petit mal* who had shot two women for absurd reasons was given six years in the penitentiary The illegality of this sentence appears in the nature of the offence if committed by a sane person justifying, under present laws, a life sentence, but the suspicion that he was not "well balanced" caused the term to be shortened A life imprisonment in an insane asylum would have been more rational

Where insanity is suspected in a criminal the European method of preceding trials by an expert commision examination saves a great expense to the State and avoids the farcicalities so common in our American courts in similar cases, but as our peculiar institutions would, in nine cases out of ten, foist ignorant politicians upon us as members of such a commission, scientific alienists are not inclined to enthusiastically favor a change from the present faulty methods of lunatic inquiry

Many generations may come and go before the world can adjust itself to identify crime with insanity, but that eventually such a view will prevail appears to me to be inevitable as the outcome of progressive thought When that time comes there will be no penitentiary, for the asylum will quarantine against all who cannot conform sufficiently to social requirements, there will, furthermore, be no practical politician, as we understand him to day, for recognizing him as a member of the crime class his public treasury burglaries will be thwarted and the reason for his existence will cease

Alienists are too busily engaged in trying to convince the lawyer and the public that there should be no distinction between medical and legal insanity to undertake greater tasks, and it is this constant endeavor of higher knowledge to adapt itself to the conceptions of the period that causes such a thing as medical jurisprudence to exist It was formerly treason against God, king and common sense to deny witchcraft, all that could be done in defense was to prove the unfortunate not to be a witch I am not so shallow as not to foresee that many considerations would arise under such an adjustment that would require a great revision of our statutes, but I believe the Code would be greatly shortened and that criminal lawyers would be few in number, the main ground for contention would be the fact of crime commission

Polemics over accidental or designed acts would be abbreviated when the only object of the law would be to prevent a recurrence, and while Nature's failure to distinguish between a hand thrust deliberately or accidentally into the fire might not altogether be copied it could be thought of in disposing of the man who jokingly points an unloaded gun at another, for that species of imbecility is as deserving of regard as any other

So much for the future, but as an evidence that enlightened views are beginning to prevail we may note that the Wisconsin Senate passed a bill to send convicted drunkards to insane asylums, in spite of the teachings of ecclesiasts that drunkenness is a crime and not a disease

As however, in the present, responsibility is not to be discussed in court rooms from the philosophical side, it at least should be granted that the alienist is best able to consider the facts of insanity even from the legal and lay outlooks At once, then, it should be known that insanity cannot be dealt with as one and indivisible any more than sickness in general There are many kinds of insanity and a knowledge of their phenomena is requisite to an intelligent judgment For example, take one of the circular or recurrent forms such as katatonia, where the patient may be melancholic, stupid, maniacal, and then apparently rational, alternately Judge, jury and lawyers *cannot* pass upon such a case properly without a knowledge of these phases and as to whether the lunatic is or is not a katatoniac.

One with a head injury often becomes very intolerant of alcohol and upon occasion may commit some grave offense These and multitudes of as well established facts should be duly held up to view

There is such a malady as transitory frenzy, which may last hours or a less time and during which suicide

or murder may be accomplished I reported one such case in which a poorly balanced female head, under large doses of some abortifacient, attempted to throw herself from a window and cut her arm arteries with scissors Had the onslaught been made upon some other person she would have had great difficulty in proving her temporary insanity for it was of but brief duration

Witness poor John McCullough, the actor, wandering about with his delusions of grandeur and nearly every other evidence of paretic dementia fully recognized as such by able alienists who were unwilling to advertise their judgment and suffer the abuse of medical ignorami, even though time would have sustained the verdict

The German alienists more particularly have advanced psychiatry to a footing with many of the more exact provinces of medicine This is no less a truth because the fact is not generally known and that practitioners are often found who, like Fordyce Barker, are capable of appearing as experts in toxicology, gynæcology, surgery, ophthalmology and psychiatry

The olden dictum that the depths of one's attainments are inversely as their breadth, while needing some qualification, applies in such cases, for medicine has differentiated and developed beyond the possibility of any single person attaining proficiency in all The shoemaker may as well attempt to discuss the relative merits of Jurgensen and Waterbury watches as for the medical specialist in one line to pass judgment upon another

If some legislative provision were made for insane criminals and the criminal insane as was suggested by Dr Dewey, of the Kankakee Asylum, judges and juries might see their way clear to a more rational disposition of such cases as popular condemnation impels them to pronounce "sane but illy balanced"—"not insane but a crank'—"responsible for his act but of a low grade intelligence"

Especially should medical men insist not only that physicians should be selected as superintendents of asylums but, if it is not asking too much, that such physicians should know something of insanity Recently, in Chicago, lawyers were allowed to nominate candidates for judgeships from among themselves Why would it not be as well to permit physicians to select the heads of medical institutions, instead of relegating this power to saloon keepers, gamblers and prize fighters, some of whom, at least, are indicted thieves and more are justifiably suspected to be

At first glance it might seem advisable to compel asylum officials to keep full records of all cases admitted, and to have some more careful method for the receipt and discharge of lunatics, but as brains and scientific ability cannot be legislated into the heads of medical politicians the records kept by such a one would be valueless and the liberation of dangerous paretics can only be prevented by the asylum physician knowing a little about insanity, the recommendation that respectable alienists should be appointed to superintend asylums would cover the points better than the legislation named The Illinois State Legislature has been appealed to with regard to enacting some suitable punishment for attendants who illy use, wound, or occasionally murder the insane, but time is taken up by fisticuffs among the honorable members and calcimining self investigations covering alleged steals

Then as to the status of the expert in court He is usually selected by one side instead of by the judge and theoretically is presumed to be unbiased He is placed in a false position, for being the recipient of a fee from one side his allegiance would seem to be due to that side and were his testimony harmful thereto he would, with some show of justice, be considered as having betrayed his trust

There seems to be but one honest position for him to assume that of a partisan who may coach the lawyer who engages him If he can conscientiously, in addition to this, go upon the stand as an expert his convictions should be freely expressed and the lawyer should take his chances with such testimony just as with that of any other witness whom he calls

Ray's suggestions are good

1 That the expert should be asked if he gave his entire time to the study and practice of one branch of medicine, and if that branch was psychiatry

2 That the expert opinion should be rendered in writing which would cause legal trickery to be harmless

These suggestions apply equally well to neurological cases which are mainly actions against corporations for spinal injuries wherein Ericson figures largely for the plaintiff against Page for the defendant In a disorder that presents such a preponderance of subjective symptoms as spinal concussion, and in all other cases where simulation might be alleged as in paralysis, contractures, etc, the value of faradic and galvanic tests of muscles and nerves should be more fully appreciated, especially since with the milliampèremeter and Erb's electrical charts we have the means of graphically presenting the conditions ascertained in such a manner that the jury may readily comprehend

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THE USE OF THE CURETTE AND INTRA-UTERINE DOUCHE AFTER LABOR AT TERM

Read before the Chicago Medical Society, September 19, 1887

BY J SUYDAM KNOX, M D,
OF CHICAGO, ILL

I think it will pass unquestioned that the sole object of washing out the uterine cavity, or of using the curette within it, post partum, is for antiseptic purposes Septicæmia or putrid absorption is possible during the puerperium of every woman If, therefore, these operations are perfectly harmless, they should be freely performed as a prophylactic measure, and should be heartily endorsed by obstetricians

If, again, the uterine cavity be the common origin of the septic and inflammatory accidents of the lying in, again should the curette and the intra uterine douche be used at the first signals of such abnormal disturbance

If, however, these operations be dangerous, requiring extreme care and precision, if, further, most of the inflammatory and many of the septic affections of the puerperium have not their origin in the womb, then the use of the intra uterine douche and the curette should be discountenanced, except in the hands of the skilful, and in the presence of positive indications

This brings us at once face to face with two questions, viz

1 To what extent, after labor, are douching and curetting the uterine cavity harmless?

2 What proportion of puerperal inflammations and septic fevers have their origin in the uterine cavity?

Let us consider these questions in order

1 To what extent, after labor at term, are douching and curetting the uterine cavity harmless? At first sight it would seem almost useless to quote authorities in answer to this question Scarce a writer on obstetrics, in describing these operations, but writes with precision and minuteness of detail emphasizing caution and precaution I have time to quote from but one or two

Lusk[1] says "The operation of cleansing the uterus should be conducted with the most scrupulous care Intra uterine injections should be resorted to with extreme circumspection Among the accidents which have been referred to the use of injections, are convulsions, shock, and carbolic acid or corrosive sublimate poisoning, but the chief danger lies in the possibility of conveying the infectious material from the vagina to the previously normal uterus" Then quoting Carl Braun, of Vienna, he says[2] "Braun von Fernwald, with his vast opportunities for judging obstetrical questions, writes in reference to this 'We must protest against injections made by physicians into the uterine cavity—such meddlesomeness is more likely to do harm than good'" "This," says Lusk, "corresponds with my own experience"

Charpentier[3] writes "A certain number of accoucheurs in France, and eminent ones, are afraid of intra uterine injections, and look upon them as more harmful than useful"

Although an earnest advocate for intra uterine douches where "strictly indicated," Charpentier emphasizes this[4] "Let it be understood, however, that intra uterine douches are to be administered with care, and *always by the physician himself*"

Hofmeier[5] administered intra uterine douches after 260 cases of normal labor, 42 of these presented more or less serious symptoms In another series of 240 cases of normal labor no intra uterine douches were given, only 19 of these women presented any unusual symptoms Paul Bar,[6] speaking of the dangers of these douches, says "After the injection is given, we occasionally see some alarming symptoms develop, the woman becomes pale, she faints, soon she complains of severe pain in the hypogastric region, then she experiences the greatest anguish These symptoms may be temporary But sometimes they assume the greatest gravity, and death may supervene immediately or after a few hours"

The above quotations from writers of large obstetric experience, and practicing the operation under the most favorable circumstances, are sufficient to show that intra uterine douches are by no means harmless

I do not hesitate to acknowledge that many, possibly a majority of the obstetric teachers of to day are advocates of intra uterine douches, some of them, like Schultze, Schulein, and Grunewald advising them, as a prophylactic, after all labors This, however, does not affect the conclusion that they are *not* harmless

There is a vast difference between the conscientious care, exact methods, and skilled operations of Continental maternity obstetricians, and the practice of our average accoucheur If only one of the gentlemen before quoted has found such douches occasionally harmful, then are they dangerous, yes, at times murderous, in the hands of the careless many The most enthusiastic advocates of the intra uterine douche insist that it must be administered with the most scrupulous care The external disinfection of the patient, the thorough disinfection of the operator, the aseptic injector passing through a thoroughly aseptic vagina, the exact temperature and force of the injection, the entire exclusion of atmospheric air from the uterine cavity, the free drainage—in fact all the details of the operation, not one of them must be omitted Leave out the simplest of them and the whole method is vitiated The arch loses its strength by the removal of a single stone

How absurd even to expect this of the average practitioner, or average obstetric nurse How vicious, unless positively indicated, and antiseptically practiced, to deliberately accept the risk of infecting the uterine cavity

Since the use of the curette necessitates the subsequent use of the douche, the risks of the latter apply to it In addition are the necessary admission of air into the womb, the creation of further wounds, the provocation of hæmorrhage, the shock of operation and the possible perforation of the uterine wall

2 What proportion of puerperal inflammatory and septic fevers have their origin in the uterine cavity? Not what is the *cause*, but whence the *source* of these puerperal accidents?

The fact that a woman is parturient does not protect her against the inflammatory and zymotic diseases common to her sex or to mankind Her puerperal condition may gravely modify the normal course of an invading sickness and cloud the prognosis, but it does not influence the origin Parturition is no specific against malarial manifestations, nor contagious zymotic diseases, neither does it protect from acute inflammations of mucous and serous surfaces, nor traumatic inflammations of cellular tissue and gland organs Supply approximates causes, and they all arise equally before, during, or after gestation Such intercurrent maladies often retard

[1] Lusk. Science and Art of Midwifery D Appleton & Co 1887
[2] Loc. cit
[3] Ency Obstet and Gyn W Wood & Co 1887 Vol iv p 368
[4] Loc cit. p 373
[5] Cent. f Gyn. 1880
[6] Bar Princ Antisep Methods in Obstet. Practice. P Blakiston & Co Philadelphia 1887 p 140

the convalescence of the lying in woman, and can proceed to a fatal termination without the slightest evidence of sepsis It is not necessary to quote authorities in defense of this There is no dissent from it

In this age, when nearly every puerpera having chill and rise of temperature is treated with the intra-uterine douche, according to Schultze's idea "that we must adopt some aggressive form of treatment, and treat each puerperal woman as if she already had puerperal fever," it seems to me necessary to protest against so pernicious a practice Such a procedure in purely inflammatory puerperal accidents is not only thoroughly unreasonable, and a confession of lack of skill in differential diagnosis, but it is dangerous There is the greatest risk of introducing septic and putrid material into a uterine cavity that is probably entirely aseptic

Equally well recognized by obstetricians is the fact that a majority of the inoculations of parturients arise anterior to the uterine cavity The practice in Continental maternity hospitals sufficiently proves this

In the Prague Maternity, under Prof Breisky,[7] labor is conducted antiseptically When evidences of sepsis appear, antiseptic vaginal irrigations are practiced They seldom have recourse to intra-uterine douches These are always made by the physicians

In Copenhagen Maternity,[8] under Prof Shufeldt, intra-uterine douches are only used when there is positive evidence of putrescence in the uterine cavity Otherwise vaginal antiseptic injections are administered The methods of Tarnier[9] and Charpentier, of Paris, and Spaeth and C Braun, of Vienna,[10] are practically the same Vaginal injections are the sole post partum antiseptic treatment, unless there are positive evidences of septic inoculation of the uterine cavity

Garrigues,[11] in the Maternity Hospital in New York, discards both vaginal and intra uterine douches, and believing that septic infection post partum originates at the orifice of the parturient canal, uses his occlusion bandage with remarkably good results

Lusk,[12] in the last edition of his work on obstetrics, in summing up this subject, says "Intra-uterine injections are not indicated by a simple rise of temperature A very large proportion of the febrile attacks which occur in childbed run an absolutely favorable course Unless the infection (and this is not the rule but the exception) proceeds from the uterine cavity, they are unnecessary "

If, then, the post-partum use of the intra-uterine douche and curette be not harmless in the hands of the most skilful, and is dangerous as used by the careless, and if, further, there are many inflammatory accidents of puerperæ that are not septic, and many septic accidents that do not arise within the womb, when shall we administer them? I would formulate the following rules

1 Where there is positive evidence that there is putridity or septic infection of the uterine cavity, the douche is imperatively demanded

2 Where the douche does not succeed in abolishing the fetor or septic symptoms, the curette should be cautiously and thoroughly used

3 Where the womb has been thoroughly irrigated and made aseptic, the douche should be discontinued

4 Where there is septic fever, with doubt as to its uterine origin, vaginal antiseptic douches should be first attempted. Only on their failure should intra uterine douches be resorted to

5 In purely localized inflammatory affections, with no evidence of sepsis, the intra-uterine douche is absolutely contraindicated

6 The intra-uterine douche should never be used simply to lower temperature

And as a corollary to the above should be added

7 It should be considered a criminal offense to administer an intra uterine douche without proper antiseptic precautions, or to intrust its administration to an unskilled assistant

Lest this last be considered too harsh and arbitrary, I would explain that it is a slow outgrowth from observation of the practice

There is a growing tendency, in this germ crazed age, to charge every deviation from a normal lying in to bacterial agency, which I believe to be wrong There is also a growing tendency, on account of the brilliant results obtained in maternity hospitals, to apply the methods of such hospitals to private practice I do not object to the methods, but I do strenuously object to this application The fact is, the influences affecting the two classes of parturients are radically different The best results obtained in maternities to day, under strict antiseptic precautions, do not exceed those of ordinary private practice without special antisepsis Besides, it is not possible to carry into private practice the routine of the hospital Whenever the influences *are* similar, the same methods should be rigidly enforced

Again, in the practice of these methods I earnestly and solemnly protest against the divorcement of the technique from the operation The intra uterine douche or the use of the curette is valuable, not so much because the injection is antiseptic, or the *débris* is removed, but because it is done antiseptically Unless so done it is worse than useless

This growing easy faith in the harmlessness of uterine irrigations administered carelessly, and often entrusted to unskilled and ignorant nurses, is to me appalling

I would close this brief paper with two quotations which fully express my views The first is from Egbert H Grandin, M D , of New York [13] "There is one point in regard to the intra-uterine douche on which sufficient stress cannot be laid, and this is that it is useless, and is not indicated, except where the source of infection lies in the cavity of the uterus Exudations around the uterus, whether of septic or traumatic origin, are not benefited, but may be, on

[7] Quoted by Bar
[8] Quoted by Bar
[9] Quoted by Bar
[10] Quoted by Bar
[11] Antiseptic Midwifery Garrigues 1886 [12] Loc cit

[13] Ency Obstet and Gyn W Wood & Co , 1887 Vol iv, p 378

the contrary, intensified by manipulation of the uterus Fœtor, rise of temperature, chill, may depend on a lesion of the vagina or cervix, as well as on infection from the uterus We must first differentiate the source of the infection, as nearly as may be, and where in doubt, in the absence of evidence of cellulitis or of peritonitis, it is a good and a safe plan to give, with care, one thorough intra uterine douche "

The second is from the pen of Lusk [1] "It cannot be too strongly insisted upon that, in a rightly conducted confinement, infection does not begin in the uterine cavity, and that the need of such injections is a confession of faulty procedure "

OPERATIONS FOR MASTOID DISEASE

Read at the Thirty Seventh Annual Meeting of the Illinois State Medical Society

BY SETH S BISHOP, M D

CHICAGO SURGEON TO THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY, TO THE ILLINOIS MASONIC ORPHANS' HOME ETC

The purpose of this paper is to increase your confidence in operations on the mastoid process Some physicians, for whose attainments I hold the highest regard when matters of ordinary surgical experience are under consideration, have questioned the expedience of surgical interference in mastoid disease Principles that are admitted to be unimpeachable in general practice, have been disputed when applied to the treatment of mastoid abscess and necrosis No surgeon denies that free and early exit should be given to confined accumulations of pus, yet this correct surgical precept is not only neglected, but advised against by some of our excellent practitioners Being fortunate enough to have had a very gratifying experience with several cases in which operations were imperative and successful, I desire to impress you, as I have been impressed, with the necessity, safety and success of these operative procedures

A few words may be profitably devoted to the subject of

PREVENTION OF MASTOID PERIOSTITIS

and abscess I have often dissipated an incipient inflammation of the periosteum by means of counter-irritation with cantharidal collodion or essential oil of mustard, applied generously over and below the mastoid process I endeavor to produce as active irritation as possible without vesication, and for this purpose the mustard oil is superior, although its volatile quality renders it disagreeable to both patient and surgeon I have had numerous cases in which these remedies were not applied until after pain, redness, swelling and tenderness were marked, and yet these irritants used once or twice a day for a few days caused the inflammation to subside, and saved patients from the agonies of mastoid abscesses Leeches, poultices and rest, with antiphlogistic remedies, will frequently effect the same result But let us suppose that the opportunity for these measures is past, and that the formation of pus is inevitable, or that fluctuation is already present, what is the best course to pursue? What, but the same that we adopt in similar conditions in other parts of the body? A free

INCISION

with a strong knife should be made clean down to the bone, and from a half inch to an inch and a half long The cut should extend over the most prominent portion of the swelled mastoid tissue, directed from below upward, parallel to the attachment of the auricle Should no pus escape immediately it will likely do so in a few hours, and we shall have dispelled the exquisite pain by relieving the stretched nerves of their unnatural tension Free bleeding will probably occur from the divided posterior auricular artery, but this only depletes the over distended vessels—adds water to the fire, oil to the burn A grateful sense of relief comes soon, and we may confidently expect all the symptoms to be ameliorated If no caries be present the wound should be cleansed, and dressed with finely powdered boracic acid, absorbent cotton and antiseptic gauze bandage, with a drainage tube or tent in the lower end of the wound

So far we have dealt with a periostitis, or an abscess, in the course of which the disease has not invaded the bone Although such cases are the concomitants of suppurative otitis media they are quite amenable to the preventive and curative treatment outlined above, associated with treatment directed against the middle ear disease, so long as the integrity of the bone is not affected Let us now pass to the consideration of necrosis and the operations for

OPENING THE MASTOID CELLS,

After Wilde's incision has been made, as described above, the surface of the bone should be thoroughly explored with a firm probe to discover any caries or a sinus which might exist If there is no more serious condition than superficial caries, this should be dislodged with the chisel, gouge or curette, care being taken to preserve all the periosteum When dead bone is to be removed it becomes necessary to make a secondary incision, extending backward, at right angles to the middle of Wilde's incision in order to get sufficient space for the use of bone instruments When a sinus is found I make the two incisions meet directly in the sinus, dissect up the periosteum and over lying tissues, and have the flaps retracted and held out of the way by assistants If the opening is a small one it should be enlarged with a small drill sufficiently to afford free drainage and to remove all the diseased bone I have found the openings effected by nature in some cases too large and irregular to admit the use of either drill or trephine In such cases the chisel, gouge and curette are required Occasionally one may find spiculæ of bone loosened which he can remove with the ordinary dressing forceps, with a little careful manipulation to detach it from its irregular surroundings When there is quite a large area of bone denuded of its periosteum we may find, on pressing the finger upon it, that it gives, as though it were

[1] Loc cit

hung on one side by a stiff steel spring In such a case the line of demarkation between the healthy and diseased tissue should be sought, and the division be effected by the delicate chisel and mallet A trephine may be useful also for this purpose if one can find a firm place for its fixation shaft In using the chisel one should be sure that it is sharp and properly shaped, and that the blows of the mallet are light, otherwise more bone than we wish to remove may be taken It has happened to me in a case where the necrosis was very extensive that the whole lower portion of the process has given way under a dull chisel, carrying with it some healthy bone, and exposing the dura mater The chisel was not properly tempered and beveled, and the cutting surface chipped during the operation After all the superficial dead bone has been removed and the edges of the sinus rimmed out and made smooth by the conical drill, we may find the cellular tissue of the process diseased and filled with dark red, ugly looking granulations The curette, adapted in size to the circumference and contour of the opening in the bone, should then be employed with the utmost caution to avoid injury to the dura mater, the lateral sinus, or the middle ear Frequent stops should be made to examine the tissues we encroach upon and to determine when we reach sound parts Small sponges used frequently will free the wound of blood so that we can make satisfactory examinations of our progress, and if the bleeding is considerable it is advisable to have an assistant syringe the cavity at every step with a warm solution of mercuric bichloride, 1–10,000, so that we shall make it impossible to remove tissues that should be left intact In this way I have removed diseased bone until portions of the inner table were taken out, the dura mater exposed and the pulsations of the brain were visible, and yet have avoided harming the dura mater, as the subsequent progress of the case demonstrated

In using the trephine or drill the instrument should be directed upward, forward and inward, as a rule, but the location of the sinus, if one be present, or the place selected for opening the bone, must help to determine the direction of the instrument The pressure exerted on the drill or trephine should be very light, for fear that the outer layer may be unusually thin, and that the instrument may suddenly settle into the soft tissues beneath The thickness of the outer layer will average from an eighth to a quarter of an inch In children it is very thin, while in adults I have found it nearly a half inch thick

The operation ought not to be ended without syringing the wound, cleaning out all the debris and examining the cavity minutely by the aid of strong illumination made brilliant by the concave mirror if necessary It requires the closest scrutiny to prevent the overlooking of small particles of diseased and dead tissue Should we not be successful in removing all of this, the erosion may extend and require a subsequent operation But the necessity of a repeated operation does not perforce argue that all the necrosed bone was not taken at a previous operation I have several times removed diseased bone from a mastoid process which had been operated on before by a competent surgeon At each operation the most critical inspection, under brilliant artificial illumination, has satisfied all the surgeons present that no unhealthy tissue remained But this occurred in an extremely unpromising patient of a strumous diathesis, upon whom I operated to prevent meningitis and cerebral abscess Nearly the whole mastoid process crumbled away, and some time after the third operation I found the incus lying loose in the wound

It is remarkable how rapidly a suppurative inflammation of the middle ear may involve the mastoid cells in caries, and how extensive the necrosis may become after a few weeks' duration I have seen cases that were discharging pus from a sinus which had existed for three weeks only, and where the advent of the sinus was preceded by no more than four or six weeks of suppuration of the middle ear, if the statements of patients and friends were to be credited Upon enlarging the opening I have had to scrape away unhealthy granulations and dead cells with the curette, until the mastoid process was literally converted into an empty cup, before all the products of disease were removed

If my observations are correct, the rapidity of this destructive process is greater in children than in adults It follows, then, that it is better to operate early, when the case requires it, to prevent extensive necrosis, and the vigor of youth renders the prognosis the more favorable

It is a custom among some operators to leave the edges of the cut gaping, and to fill the cavity with lint, that it may heal from the bottom I have preferred syringing the parts with the bichloride solution, dusting them freely with iodoform, inserting a drainage tube at the bottom of the wound, sewing it up and dressing it with absorbent cotton and a bandage of antiseptic gauze With this treatment there is but little subsequent discharge The case is seen daily and dressed as often as cleanliness and antisepsis require

I have entered thus minutely into a description of this operation for the reason that it is rarely performed except by specialists, and although I have enjoyed the ample opportunities offered by the surgical clinics of New York, I never had the advantage of witnessing the operation until I first performed it Yet I must say that the results in the first case were not surpassed by those in any other The patient was a young man, 18 years old, with a discharging mastoid sinus accompanying a chronic suppuration of the middle ear The caries was extensive and the hearing much impaired I removed all the dead bone without sacrificing any of the periosteum, and followed a course of treatment adapted to the condition of the middle ear, with the result that in fifty six days the wound had completely filled in and healed with hard cicatricial tissue, and the tympanic disease was cured I met the patient on the street a short time since and he stated that he had experienced no further trouble, and that his hearing was as good as ever it was before the operation

For the sake of brevity I will give but a skeleton

sketch of one or two other cases An interesting one is a boy 6 years old, who had scarlet fever, followed in two weeks by an acute suppurative inflammation of both middle ears Two months later, when I first saw him, a mastoid abscess had developed, necessitating Wilde's incision Exploration with the probe revealed a sinus and softened, roughened bone I was unable to obtain his parents' consent to an operation until three months later, when I operated at the Chicago Medical College In the meantime I had succeeded in curing the suppurative process of the middle ears and had kept the sinus cleansed with solutions containing boracic acid, carbolic acid, mercuric bichloride, iodoform, the hydrogen peroxide, etc Anæmia and malnutrition demanded tonics and alteratives, whereupon he grew fat and plethoric At the operation it was found that a large part of the external layer of the process was denuded of periosteum, the bone was black and movable, and the cells were filled with very dark, unhealthy looking granulations and pus After removing all the diseased tissue the wound was dressed antiseptically, and in eighteen days had completely healed and the patient was well Some weeks later, while the boy was at play with his companions, he received a blow over the cicatrix, which was followed by an acute inflammation and suppuration A small spicula of healthy looking bone, which the blow might have detached, protruded from the wound and was picked out The wound then healed and opened several times, and when I last saw the patient there was a pin hole opening and an oozing of a drop of sero purulent discharge in the course of the twenty four hours This patient has made a complete recovery

The only other case in which the results were not completely curative and satisfactory, was the one already mentioned as a bad case of scrofula It was a woman in whom all the lymphatic glands were enlarged, she was emaciated, anæmic, without appetite or strength, and required the most invigorating and supportive treatment both before and after the operation I should not have felt justified in operating were it not for the fact that the patient would likely have died of exhaustion, pyæmia or cerebral abscess, if the extensive necrosed tissue were not removed and the suppuration stopped She had been operated on five months previously, but the wound had never closed or ceased to suppurate When she left the hospital the wound had not entirely closed, and there was a slight discharge, but no dead bone She was permitted to go to the country on condition that she should return for treatment three times a week until cured I never heard from her again

These two are the only cases in which the cure might not be said to have been complete before they passed from under my observation, and during the past year I have had seven patients under my care in which the operation was imperative Two of these cases were operated on by my colleague at the Illinois Charitable Eye and Ear Infirmary, Dr F C Schaefer

The arguments in favor of the operation may be summarized as follows Three fourths of the cases were completely cured The remainder were benefited None were worse for the operation Nature's method of opening abscesses and casting off dead bone is slow and uncertain The presence of confined pus threatens necrosis, and the presence of necrosis and pus threatens meningitis, cerebral abscess, pyæmia and death

719 W Adams St

THE CHOICE OF GENERAL ANÆSTHETICS IN SURGERY AND OBSTETRICS

Abstract of a Paper read before the Medical Society of Virginia, October 19, 1887

BY HUNTER McGUIRE, M D,
OF RICHMOND VA

Beginning with a denial of the common statement that the use of any anæsthetic lessens the success of operative surgery, Dr McGuire mentioned that chloroform is the popular anæsthetic used in France (except in Lyons), Germany (except in Vienna), and in Italy In Great Britain, mixtures of ether and chloroform are principally used In China, chloroform is chiefly used In the United States, ether is the popular agent throughout the Northern and Northwestern States, while chloroform is the generally adopted anæsthetic of the Southern and Southwestern States Thus it will be seen that throughout the civilized world, chloroform is much more generally used than ether Combining the obstetrical cases in which anæsthetics are used with the surgical, it may be safely estimated that chloroform is used twenty times as often as ether as the anæsthetic—the two agents to which he restricted his paper He predicted that when a full analysis of all the facts is finally made, in certain cases it will be determined that ether should be given, and chloroform in certain other cases—thus establishing the special value of both In general terms, in the feeble or anæmic, or in those prostrated by shock or loss of blood, he prefers ether, but when there is cardiac, renal or pulmonary trouble, chloroform is preferable Up to the present time between 400 and 500 deaths from chloroform have been reported, and about 100 deaths from ether, but he was unable to say what the ratio of deaths by either agent is to the total number of administrations Sphygmographic tracings during chloroform anæsthesia show depression of the circulation, this is only occasional, and then not so marked when ether is given Hence cardiac paralysis is more likely to follow the use of chloroform But experience proves that when chloroform is withdrawn, and consciousness returns, the patient is safe But this is not the case after ether is withdrawn Even acute nephritis or pneumonia occurs sometimes as the result of the use of ether In short, in diseases of the kidneys or lungs ether is more dangerous But both may kill—especially chloroform, by using a too concentrated vapor during the period of muscular excitement, by paralysis of the respiratory nervous centres

In selecting an anæsthetic, Dr McGuire is somewhat governed by the character of the assistant who is to administer it In inexperienced hands, ether is the safer To give chloroform requires one who

knows, and will attend to his business alone One accustomed to give ether is not usually the one to select to give chloroform To ask a patient to take long, deep or rapid inhalations of chloroform vapor is dangerous The greatest danger from this agent is in the early stage of its administration, when by a too concentrated vapor or its too rapid use, the heart centres may be surprised and overwhelmed When using chloroform, it is safer to let the patient's head be turned to one side, so as not to let the concentrated vapor—being four times heavier than air—exclude the atmospheric air Begin with a small quantity, allow a plenty of fresh air and gradually accustom the patient to the vapor Never give chloroform in a hurry

The giving of alcohol as a heart stimulant just before giving chloroform is open to serious objections In the first place, who knows what the stimulant dose is in individual cases? In the next place, alcohol increases the duration and stage of excitement, and makes nausea, etc, more likely to occur We all agree that those addicted to the free use of liquor are bad subjects for anæsthetics

The speaker mentioned a recent publication by an eminent New York surgeon, advocating the giving of a very small dose of chloroform in concentrated vapor, on the ground that if alarming symptoms set in, this amount could be speedily pumped out of the lungs by artificial respiration This is dangerous doctrine to teach In the only fatal case by chloroform coming under his observation the heart stopped *suddenly* The heart did not previously flutter, grow weak nor intermit, but abruptly ceased It was like the syncope of concussion of the brain, the contractile power of the heart was annihilated We may remove by artificial respiration in such a case all of the vapor, but we cannot in this way remove the impression made on the nerve centres which stopped that heart's action

Although frequently taught, we are apt to forget that we should never operate during partial anæsthesia Many deaths from chloroform are due to not heeding this advice that comes of experience Fatal syncope may come on from the consciousness that the painful operation is yet to follow, or if intellectual consciousness is just lost, there seems to be left, so to speak, a consciousness in the nerve centres of the heart and lungs, and the impression of pain on them is fatal Ether is safe when an operation is to be performed under partial unconsciousness In operations in which blood or other fluids may escape into the windpipe, chloroform is the safer Dr McGuire does not think he ever saw the irritability of the larynx or trachea entirely lost in chloroform anæsthesia, but he has seen it in ether anæsthesia Possibly the cold vapor of the other may in a measure account for this loss of reflex excitability in the throat

In organic heart diseases, he has never had occasion to regret the choice of chloroform, but ether is preferable in a nervously weak heart, as also in cases of weakness from fatty degeneration, or loss of blood, or great anæmia from other causes, etc In such cases any anæsthetic is hazardous, but ether is safer

Of all the elements of danger from chloroform, fear on the part of the patient, he believes to be the most important and the most frequent The heart becomes nervously weak If a calm, confident manner on the part of the administrator does not allay this fear, give hypodermically a quarter of a grain of morphia sulphate, with a one hundredth of a grain of atropia sulphate, and wait fifteen minutes or so for the physiological results before giving the anæsthetic Emotional excitement greatly increases the chances of paralysis of the nerve centres presiding over the circulation Morphia obtunds this sensibility and also acts as a cardiac stimulant, and atropia is probably a more powerful stimulant That emotional excitement is an important element of danger he believes all administrators will admit

Children take chloroform well and safely They are not afraid of being killed by it Nussbaum has seen 40,000 administrations of chloroform in military life without an accident Dr McGuire has seen, as Medical Director of Stonewall Jackson's Confederate Army Corps, 28,000 chloroform administrations without causing a death Neither the age, sex, health, etc, of the soldiers could account for this The wounded soldiers dread the hazard of chloroform very little It is also significant that chloroform has been given to hundreds of thousands of women in labor, with but one fatal case, so far as he has learned, and in this instance it is by no means certain that death was due to the anæsthetic Even when surgical operations have been required in obstetrical cases, no death has followed the use of chloroform The recumbent position does not explain all this exemption, nor do the pains of labor, for we have pain from the surgeon's knife, etc The element of success in all such cases, Dr McGuire believes, to be the want of dread of chloroform

Dr McGuire deplores the partisan debates which have occurred on this subject of the choice of anæsthetics In the last text book on surgery issued this year, is the following "In general there is no comparison between these agents, ether is so much safer than chloroform that the latter is fast disappearing in practice The estimated death-rate after ether is 1 in 20,000, in chloroform, 1 in 3000" Such statements are the outcome of prejudiced brains, and are absolutely unwarranted by any facts or figures known to the profession

COTTON GRAFTING

BY M PERL, M D,
OF HOUSTON, TEXAS

Absorbent cotton is far preferable to sponge for grafting purposes, as it is always ready and at hand, requiring no preparation for its use, while the preparation of the sponge is a tedious process, and it must be kept in air-tight vessels immersed in an antiseptic solution The following case will illustrate the *modus operandi*

Eliza Roy, female, 18 years old, was treated by me from October 18 to November 12, 1886, for cerebro spinal meningitis She made a good recovery, with the exception of an indolent ulcer three

by five inches and one half inch deep, the edges callous and turned under, resulting from a severe burn on the lower part of the right leg, caused by the application of a hot iron to her feet, one night, while in a semi comatose state, during the acme of the fever The burned place was not noticed until she complained of it some fifteen days later, when my attention was drawn to it

From that time on till April 15, I used all possible topical applications, gave tonics and prescribed a generous diet, with wine, but all to no purpose I then thought of sponge grafting, but, having none prepared, concluded to try absorbent cotton in its place The day previous I had applied a thick coating of cantharid collodion to the ulcer, which caused the surface and edges of the same to be slightly inflamed This seemed to me the best time to apply the graft A piece of absorbent cotton, the exact size and thickness of the ulcer, was saturated with a solution of corrosive sublimate 2 1000, the surplus liquid was expressed and the cotton smoothly adapted to the surface of the ulcer and held in its place by strips of adhesive plaster, over which a layer of borated cotton was spread This was covered with antiseptic gauze and the whole surface was then closed with strips of rubber plaster, making as tight a covering as possible

April 17 —The discharge being moderate, the bandage was not disturbed

April 19 —Plaster, gauze and borated cotton were removed, and adhering puss was removed by a spray of corrosive sublimate of above strength, the graft adhered firmly to the surface of the ulcer, leaving only a small space between the edges of the cotton and the ulcer, to which a solution of nitrate of silver, 1 30, was applied, and the bandage adjusted as before

April 21 —After removing the bandage the cotton graft had a pinkish color, was raised slightly, adhered firmly, and the space between the edges was much smaller The same dressing was applied

April 23 —The graft filled the whole space, adhered firmly, and was of a uniform pink color, the edges of the ulcer were flat and extended over a small portion of the graft, same dressing

From that day on the ulcer decreased in size at each dressing, and two weeks later was healed over entirely

On examining the pus with a lens, small particles of cotton fibre could be seen in it, showing that the cotton graft not only stimulates granulation, but also acts as a support to it, and, after serving its purpose, is carried away by the pus

UTERINE FIBROMA, WITH REPORT OF CASE

Read before the Section on Obstetrics and Gynecology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY J H VAN EMAN, M D,

PROFESSOR OF CLINICAL MEDICINE IN THE KANSAS CITY MEDICAL COLLEGE

The subject of fibroid tumors, of the uterus, having been treated of *in extenso* in numerous classical works and monographs, it is not necessary for me, in this paper, to enter either into the etiology, pathology, or diagnosis In the line of treatment I shall say nothing of that by drugs, only speaking of one plan of treatment, viz, removal of both ovaries for the purpose of arresting the growth of the tumors

Our management of cases being largly the result of the accumulated experience of physicians past and present, I shall omit all theory, and simply attempt to add my mite to the general sum of our knowledge on the subject In order to accomplish this purpose, I have the honor to report the following case

Mrs M H, 34 years old, married sixteen years, never pregnant, *has had poor health for twelve years* For seven years has had almost constant sanguineous discharge from the uterus, during the menstrual periods being very profuse In the last two years her physician has five times removed by means of the serrated spoon, a mass of fibroid tissue from within the uterus almost as large as a small goose egg, the growth persistently returning within three or four months after its removal

October 19, 1886 *Examination* —Patient a medium sized woman General condition fair Uterus in position in the median line Length of canal a little more than four inches Fundus above the superior strait From the os, a reddish tumor projected fully one inch Vaginal discharge, bloody and offensive In the left inguinal region, a slightly mobile mass larger than a hen's egg was readily distinguished through the abdominal wall After a thorough explanation of the probable and possible results, she consented to a laparotomy, which was made on October 20, at the patient's home, a little two roomed box house on the open prairie The tumor on the left side proved to be an ovarian cyst Uterus very much enlarged, and showed on its surface, at least two sub peritoneal fibroids Right ovary healthy Two small par-ovarian cysts on that side Ovaries and Fallopian tubes removed on both sides, pedicles dropped, and incision closed

Without going into tedious details, the history, in brief, is, that the highest pulse and temperature occurred at the end of the first 36 hours, viz, pulse 108, temperature 102°, dropping by the end of the second day to 95° and 100° From this time to the fifth day, when the sutures were removed, the pulse ranged from 85 to 90, and the temperature from 99° to 100° The convalescence went on with no complication worthy of mention

The uterine hæmorrhage continued with varying severity, and with increased putridity, until the middle of January, 1887, when after 24 hours of *severe* labor, a large stinking fleshy mass was expelled from the uterus

The further progress of the case I will give by quoting from a letter received from the patient a few weeks since

"I have not menstruated for about two months I was not *very* bad when I menstruated the last time I weigh more than I ever did in my life I appreciate good health, and haven't language to express my feelings "

MEDICAL PROGRESS.

PROPOSED CHEMICAL LUNG TEST —DR ZALESKI, of the Dorpat Physiological Institute, has published in the *Vrach* (No 32) an account of some researches he has been making with the object of introducing a new lung test, which may be trusted to give satisfactory results in cases where the hydrostatic test is inapplicable or of doubtful value He suggests that, as at the moment of birth there is not only an influx of air into the lungs, but a very marked increase in the blood circulating through them, and as blood contains in a tolerably definite proportion, the quantity of iron found in the lungs should furnish a clue to the question as to whether the child had breathed or not He examined the lungs of four stillborn children and of three children born alive, also those of a healthy man who had been killed by an accident Having of course taken care that the lungs had not been subjected to any previous section or manipulation, he tied the roots and cut off the bronchi They were then immersed in distilled water for the hydrostatic test, and, after being dried with filtering paper, they were weighed in a platinum dish, and sections were made and carefully examined After this they were dried in a hot air chamber at from 115° to 120° C until they ceased to lose weight Soda was added to the dried lung substance, also water, and the whole was dried in a water bath The mass was then ignited in a Bunsen's burner, treated with water, and thrown on a filter, which gave no ash The whole was then again ignited Here, all the iron was, of course, not in the filtrate It was then heated with strong hydrochloric acid in a water bath After the hydrochloric acid had evaporated, the residue was treated with sulphuric acid, reduced by zinc, and the iron estimated by a solution of permanganate - The result of the observations showed that the iron contained in the lungs of children that had breathed was always considerably more in proportion to their weight than in the lungs of stillborn children The mean percentage of iron (Fe) in the lungs of the stillborn was 0 0110 of the weight of the fresh lung, and 0 0828 of that of the dried lung, whereas the mean percentage of iron in the lungs of the children who had been born alive was 0 0188 of the weight of the fresh lung, and 0 1182 of that of the dried lung The iron in the case of the adult was still more than in that of the infants, the percentages being 0 0217 and 0 1266 of the fresh and dried lung substance respectively In one case in which the child had lived for five days part of the left lung was found diseased, there being evidences of septic pleuritis and pneumonia Here the diseased portion of the lung was separately examined, and found to contain a percentage of 0 0192 of iron in the fresh state, and of 0 1197 in the dry state, so that it would appear that the "iron lung test" holds good even for diseased lungs The author has not made observations in cases where there has been profuse hæmorrhage from the cord, nor in those where putrefaction has commenced, but he thinks it probable that the test would answer here as well as when the lungs have been immersed in spirit Of course, artificial inflation after death would not vitiate the test, as was indeed proved by one of the cases where Schultze's method of inflation was adopted five hours after stillbirth Dr Zaleski's "iron lung test" is evidently of too complicated a nature to be carried out by the ordinary practitioner, but in doubtful cases it would be quite practicable to preserve the lungs and send them to an expert, just as the stomach and other viscera are sent in poisoning cases Before, however, any real value can attach to evidence deduced from it, a large number of experiments must be made by different observers, and their results collated —*Lancet*, Oct 15, 1887

ANTIFEBRIN IN TYPHOID FEVER —J SOLIS COHEN says The alleged superiority of antifebrin over antipyrin in reducing excessive temperature without injury, led me to employ it during my present term of service in the German Hospital The few attempts made to reduce high temperature in enteric fever present it as a much more dangerous agent than I have found antipyrin to be in a very extensive experience with that agent So powerful an agent has antifebrin proved in the few cases in which I have used it that, as will be seen, 3 grains, or even 1, will effect very decided results on temperature The inference is that small doses should be prescribed, say 3 grains, and that the patient should be visited at the end of an hour and examined as to the reduction of temperature before a second dose is administered, similar precautions being taken as to ordering a third dose, and that when the influence is seen to be marked, subsequent doses should not exceed 1 grain The dose usually recommended has been 8 grains This has been far too large in my hands

Temperature records are appended, illustrating the effect of antifebrin, and showing a remarkable and rapid return of high temperature after initial reduction, with subsequent reduction, and rebound next day without further administration of the drug

I append notes of the effects of antifebrin, manufactured by Merck, on cases of enteric fever

Case 1 —Boy, æt 17 Ninth day of disease, temp 103 6°, 7 grains antifebrin given and repeated in one hour Effect first day of antifebrin, 6 P M, temp 103 2°, 8 P M, 98°, 9 P M, 96 4° 12 midnight, 97° Second day, 4 A M, 102 6°, 6 A M, 103°, 8 A M, 103°, 9 P M, 99°, 10 P M, 97 4° Third day, 2 A M, 102 2°, 7 A M, 102 8°, 7 P M, 104 8°, 5 grains antifebrin given, 8 P M, 101 2°, 10 P M, 99°, 12 midnight, 101 6° Fourth day, 4 A M, 104 2°, 8 A M, 102 8°, 7 P M, 103 8, 3 grains antifebrin given, 10 P M, 98°, 12 midnight, 98 4° Fifth day, 4 A M, 104 8°, 7 A M, 101 2° Orders to discontinue antifebrin and resume routine treatment of the ward

Case 2 —Married woman, æt 22 Fourth day of disease, evening temp 100 4°, fifth day, first day of antifebrin, 7 P M, temp 103°, 3 grains of antifebrin given, 8 P M, 98°, 10 P M, 96° Second day, 2 A M, 98°, 4 A M, 95°, 6 A M, 98°, 8 A M, 102°, 7 P M, 99° Third day, 8 A M, 96 6°, 8 P M, 103 8°, 1 grain antifebrin given, 9 P M, 99°, 12 midnight,

98° Fourth day, 4 A M , 99°, 7 A M , 103 ° 5 P M , 103° Fifth day, 6 A M , 98°, 5 P M , 100°

Case 3 —Boy, æt 19 Temp 5 P M , 103°, 5 grains antifebrin given, 8 P M , 101 4°, 9 P M , 100°, 10 P M , 97 6° Second day, 2 A M , 99 2°, 7 A M , 99 8° 7 P M , 102 8° Third day, 7 A M , 100°, 5 P M , 102 6°

Case 4 —This was a case of so called recurrent typhoid, reentering the hospital, 7 P M , 104 8°, 3 grains antifebrin given, 10 P M , 100 2°, 12 midnight, 103 2 Second day, 4 A M , 102°, 7 A M , 103 8°, 5 P M , 103 6°

Case 5 —Temp 8 P M , 104 2°, 1 grain of antifebrin given, 10 P M , 104°, 12 midnight, 104°, 2 grains antifebrin given, 2 A M , 102 8°, 8 A M , 102 8°, 5 P M , 102° —*Medical News*, October 8, 1887

Chloride of Ammonium in Hepatic Disease —Surgeon General W Stewart says The following is a summary of the auxiliary treatment, diet, and management of congestion of the liver, and mode of administering the ammonium chloride

Bearing in mind what has been said of the therapeutic effects of the drug in hyperæmia of the liver, and the indications to be drawn from the symptoms and pathology of the disease, the first thing to be done is to put the patient to bed, there to remain, in acute cases, during the whole course of the disease, in short, till the congestion, pain, and general and local distress and uneasiness shall have subsided, and that the patient may have no occasion to quit his bed, a bed-pan and urinal should always be at hand, as well as a trusty attendant to minister to his wants By the recumbent position and the avoidance of all sudden and violent movements, mechanical rest and support are given to the enlarged, weighty, and oppressed or painful organ The horizontal position, too, facilitates the auto transfusion of the blood from the portal system, through the hepatic capillaries, into the general circulation, under the influence of our special remedy—a process which will be better understood now that the reader is in possession of the details of the local signs expressive of the effects produced by it the excitation of the muscles of the intestinal canal to increased peristalsis, and those of the abdomen and thorax surrounding the liver to tonic contractions, by which muscular pressure is brought to bear on the radicals of the portal vein, and on the liver and gall bladder, which not only hastens forward the entire portal stream, but may squeeze out of the liver some of the superfluous blood as well as free it and the gall bladder from retained bile By the increase of the functional activity of the liver, as well as the increased flow of blood to the skin, as a further result of its action, a *vis a fronte* is brought into play in aid of the *vis a tergo* above described, by which the equilibrium of the entire circulation is speedily restored The free perspiration induced by the drug is also promoted and chills avoided by the rest and warmth of bed I have shown elsewhere that it is to this latter stage of its operation that much of its value is due—the free diaphoresis favors sleep, while the nervous system generally is exhilarated and soothed, and the patient almost entirely relieved from all distressing symptoms

It is equally important that the congested (or it may be, inflamed) liver should enjoy, as far as possible, physiological rest To this end, on no account must solid food be given to the patient, and wine, beer, or other alcoholic stimulants must be strictly prohibited The diet must be of the least irritating character, and only small quantities of milk, beef tea, or farinaceous articles should be taken at a time Barley water may be taken freely as a drink If there be diarrhœa, the patient passing frequent loose bilious or dark colored motions, a pill composed of two grains of mercury and three grains of Dover's powders, repeated every two hours till four or five have been taken, will be found the most effectual means of checking it without the risk of setting up gastro intestinal irritation Looseness of the bowels, however, does not contra indicate the use of the chloride of ammonium—indeed, it is in itself the best remedy in cases of diarrhœa associated with hepatic congestion The only condition which contra indicates the immediate use of the drug in acute cases is the existence of a combined hot and dry state of the skin with pyrexia Under such circumstances its use should be preceded by a few small and frequently repeated doses of acetate of ammonia, till the skin is rendered moist and perspirable Pyrexia being absent—or, if present, the skin being soft and perspirable,—the chloride should be at once commenced and persistently administered in doses of twenty grains twice or thrice daily, with strict attention to the rules above laid down as to diet, rest, etc , till it no longer produces sensible effects, or till all local uneasiness, hepatic pain, and tenderness have subsided Fomentations or hot bran bags applied to the seat of pain in the side will be of use in aiding determination to the skin generally, as well as by their local soothing effects —*Lancet*, Oct 22, 1887

Treatment of Diphtheria —Mr E Stanley Smith says Recently published memoranda suggest the following notes Gargling in diphtheria, as in all acutely inflamed conditions of the throat, is surely to be avoided if possible Physiological rest for inflamed parts is usually regarded as a cardinal point in therapeutics, the act of gargling involves violent exertion of the muscular apparatus of the fauces and palate, the routine prescription of a gargle frequently causes patients great suffering, and may, I believe, do absolute harm There are few, if any cases in which all the benefits of topical application are not obtainable by either painting, inhaling, or spray

There is nothing new or original in my ordinary treatment of diphtheria, but as it has been very successful, I may be excused for describing it Upon first seeing a case I order salicylic acid, 10 to 20 grains, suspended by means of mucilage in ½ ounce or an ounce of water, to be taken every two to four hours, if there is much pain, I combine 5 to 10 minims of succus belladonnæ with each dose In severe cases I give also a mixture of perchloride of iron and quinine, usually one dose after every two of salicylic acid The acid has answered better than salicylate of soda, especially because, being suspended in mu-

cilage, it adheres to the inflamed surface as it is swallowed, and in mild cases serves all the requirements of a topical application, there is often a little vomiting after the first dose or two, but that soon passes off In all cases, except the mildest, one of the following applications has always served me well, namely 1 Inhalation of eucalyptus oil, 10 drops to ½ pint of hot water, inhaled for five minutes every hour or two 2 Spray of sulphurous acid, diluted with about twice its bulk of water, the acid should be freshly prepared, as evidenced by its pungency 3 Spray of chlorinated soda solution, 1 part of the *B P* solution, with 3 or 4 of water

Whichever spray is used should be applied most assiduously, as often as every hour at first, and it is essential that its administration should be supervised by a thoroughly skilled person, in cases where the upper part of the fauces or the nares are involved the spray should be separately applied to both throat and nostrils

With young or intractable children, inhaling may be managed by means of a bronchitis kettle, and spraying by a large spray-producer—a steam spray answers best—placed at a sufficient distance to ensure its saturating the child's immediate atmosphere

The remarkable restorative powers of Warburg's tincture were well shown in one case of severe nasal diphtheria, in a child about 4 years old The acute inflammatory condition had subsided, there was not much membrane left, the temperature had dropped, the heart's power was decidedly flagging, in fact, the child appeared to be dying from blood-poisoning and exhaustion He was given 10 drops of Warburg's tincture every two hours He soon began to mend, and, after about six doses, rallied so much as to be practically out of danger

Finally, I think that diphtheria, perhaps more than any other acute disease, calls for free alcoholic stimulation, and the most nutritious possible diet from the very first —*British Med Journal*, October 22, 1887

SURGICAL TUBERCULOSIS — *Tuberculosis of the Genito-urinary System* is the third division of Volkmann's article (see the two preceding numbers of THE JOURNAL)

13 Tuberculosis of the *testicle* is prevalent in younger and more mature age, but is found even in very advanced age There is, however, in old people also, a simple, suppurating chronic orchitis and epididymitis that is to be distinguished from the tuberculous form After tuberculous disease of one testicle the other is often attacked later But even in the gravest cases, in which the epididymis has already undergone cheesy degeneration and been destroyed, the testicle itself is penetrated by densely packed miliary tubercles, and after removal of the testicle the patients not infrequently remain perfectly healthy for many years, and do not get tuberculous foci in the lungs or other organs It is therefore desirable, particularly in younger persons, to castrate as early as possible, and before the cord is diseased and the process finds its way to the prostate and bladder, not losing time in making partial resections, scraping, and cauterizing Such conservative and expectant methods are rather to be recommended in the more benign cases of older people

The *secondary affection of the spermatic cord* is manifested partly as an even thickening, and partly in the form of separate wheat grain-shaped swellings in the course of the vas deferens

14 *Tuberculosis of the bladder, ureters and kidneys* is characterized as one of the most typical and grave of tuberculous affections Even in cases in which the process was localized in the bladder it is probable that cure has not been observed The demonstration of tubercle bacilli in the urine will make an earlier and more certain diagnosis possible Whether, in tuberculosis of the pelvis of the kidney, operative interference, nephrotomy and nephrectomy, will be of real value to the patients, has yet to be decided

15 In regard to *tuberculosis of the vagina and uterus* I have not sufficient experience Such cases will more probably come into the hands of gynecologists

16 *Tuberculosis of the mamma* is exceedingly rare, the clinical diagnosis is probably possible only in the later stages The treatment must be amputation, and cleaning out of the axilla, since the lymph channels in the axilla are generally affected early It is important to know that chronic indurated (not suppurating) mastitis sometimes causes swelling of the axillary lymphatics, that later become tuberculous and grow to cheesy gland convolutes as large as the fist, without the mammary gland itself having become tuberculous —*Langenbeck's Archiv*, Bd XXXIII, Hft 1

SUTURE OF THE BLADDER —The *Deutsche Medizinal-Zeitung* summarizes a recent article by DR A BRENNER, an assistant at Billroth's clinic, published in the *Archiv fur Chirurgie*, by which it appears that the author appreciates the force of Guyon's remark that the bladder should be sutured hermetically or not at all. In the method that he suggests, which as yet he has carried out only on the cadaver and in the case of dogs, two threads are carried around the wound, at the distance of an inch or less from it, one running in the submucous tissue, and the other in the muscular coat, care being taken that neither shall involve the mucous membrane Both are then tightened and securely tied The result of this is to form a rosette like pouch, which slightly alters the shape of the bladder, but the wound is made water-tight and air tight —*N Y Med Journal*, Oct 22, 1887

PHTHALATE OF MORPHIA, as compared with other salts of this drug, BOMBELON claims to be highly serviceable It is soluble in 5 parts of water, and causes no irritation when injected subcutaneously It is obtained by evaporation and scaling, not by crystallization, and care is necessary in its preparation

COUMARIN AND IODOFORM, says A LANGLEBART, is a combination in which the odor of iodoform is disguised and its antiseptic properties increased He used about 1 part of coumarin to 5 parts of iodoform

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, NOVEMBER 12, 1887

THE TREATMENT OF FRACTURES OF THE OLECRANON

The cure of fractures of the olecranon, as is well known, is almost always brought about by a fibrous callus, more or less long and resistant, which, in the greater number of cases, restricts the movements of the forearm to a marked degree, and the functional result is often bad The cause lies in the difficulty in making and maintaining complete coaptation of the bony fragments The old surgeons, with the idea that anchylosis of the elbow generally takes place, placed the forearm in a position of semi flexion In this position the separation of the fragments is considerable, and consolidation takes place only by means of a long and thin fibrous band This method of treatment has now been abandoned for moderate or even complete extension Anchylosis or articular stiffness does not depend, in fact, on the position given to the limb, but on prolonged immobilization of the joint

The more rational idea, says M FRAIPONT in a recent article on this subject in the *Annales de la Societe Medico Chirurgicale de Liege*, is to place the forearm in a position which permits the better approximation of the bony fragments This position is complete extension On the anterior face of the elbow is placed a rigid splint, and the upper fragment of the bone, held up by the triceps, is drawn down by strips of adhesive plaster which pass over the summit of the olecranon and cross the forearm in a spiral The approximation of the bony parts may be done exactly in spare persons, where the fracture is accompanied by only a moderate degree of extravasation, but when blood is extravasated into the joint, especially when the quantity is considerable, coaptation is difficult or impossible Folin advises delay until the swelling has been dispersed by the use of a fixation apparatus But for this 8 or 10 days are necessary, and then it is too late to hope for bony union, even if we can succeed in placing the upper fragment against the body of the bone, for the blood between the fragments has had time to begin fibrous organization, and the new tissues play the part of foreign bodies which hinder consolidation Lauenstein two years ago proposed to treat fractures of the olecranon by Volkmann and Schede's method for fractures of the patella—antiseptic puncture of the joint by means of a large trocar, removing as much as possible of the extravasation, which is the great obstacle to coaptation, and then approximate the fragments by adhesive strips, the forearm being fixed in complete extension by means of an anterior splint He has reported two cases in which this method was successfully used, but it must be said that in these cases the patients came under treatment immediately after the injury, and before the blood had time to coagulate But coagulation soon takes place—a few hours after the fracture—and the mass is then too solid to be removed by a trocar, in such cases puncture is useless, and may be dangerous despite antisepsis, on account of the blood clots in the tissues

In a criticism on Lauenstein's article two years ago, Fraipont expressed the opinion that it would be possible in fractures of the olecranon, as in those of the patella, to practice metallic bony suture, after having carefully and antiseptically cleansed the articulation and the peri articular tissues, and last April he had an opportunity of carrying out this idea in the case of a woman, 44 years old, who had sustained a comminuted fracture of the olecranon, the upper fragment being in several pieces There was very great swelling of the elbow, so much so that the joint had assumed a cylindrical shape, and was filled with blood clots, which crepitated on pressure Under such circumstances puncture of the joint could have evacuated only what fluid there was in the joint—at best a very small quantity—and it was decided to practice metallic suture The operation was done after the most minute antiseptic precautions had been taken, in narcosis, and after an Esmarch's bandage had been applied to the upper part of the arm A longitudinal incision 12 centimetres long was made at the middle of the posterior surface of the elbow, taking in the seat of the fracture The intervals between the fragments were filled with clots of blood, black, resistant, and firmly

adherent to the bone, so that they had to be removed with a curette Similar clots were found under the skin and in all the peri-articular tissues, and a few in the joint itself, but there was very little fluid blood The cleansing was made with the greatest care, and under almost continuous irrigation with a 1 per cent solution of corrosive sublimate The fracture was transverse, and the upper fragment was divided into three pieces, a median and two small lateral, which were adherent to the fibrous tissues surrounding them The fragments were brought together and fitted by means of a single metallic suture, which passed through the three pieces, then through the upper part of the ulna, the articular surfaces being avoided The forearm was placed in forced extension The silver suture was perfectly twisted and flattened on the bone The articular capsule, torn from right to left, was then sewn up with silk, and the skin was then united by means of deep and superficial sutures No apparatus for drainage was applied The joint was then covered with a dry iodoform and other dressing

The patient left the hospital on the fourth day, having had no general reaction whatever She returned on the fifteenth day in excellent condition, when the extension apparatus and the dressings were removed There was no trace of local reaction or of swelling, and the wound had healed by first intention The sutures were removed, and after applying a layer of iodoformized collodion over the line of suture the forearm was placed in a position of moderate flexion on the arm, and fixed in this position by means of a plaster apparatus Five weeks after the injury the second and last dressing was removed, and bony union was found to be complete Tepid baths, massage and passive movements were then begun, and in three weeks the woman had perfect use of her arm, she made all the movements of the forearm with ease

TREPHINING IN EPILEPSY

DR W B FLETCHER, Superintendent of the Indiana Hospital for the Insane, Indianapolis, reports, in the *American Journal of Insanity*, October, 1887, 8 cases of trephining for traumatic epilepsy In these cases insanity did not occur at or near the time of the injury, but some years afterwards In 3 cases epilepsy preceded the insanity, but remote from the time of the injury In all but one (and in that case the injury was most extensive in appearance) very strong adhesions to the dura were found All the patients were, at the time of the operation, melancholic, suicidal, profane, and 4 destructive to clothing, none are so now

"I believe," says Dr Fletcher, "that in traumatic injury, in which sunstroke is included by most authorities, the pain and reflex nervous affections most frequently arise from the inflamed and adherent dura, at points where one of the three sensory branches of the fifth nerve is involved In none of these cases do I think the cortex had undergone any pathological change"

In two cases it was noticed that in tearing up the adhesions the face, platysma and fingers on the same side were convulsed, while a probe passed freely upon and into the convolutions without causing visible sign of excitement It would be comparatively easy, says the author, to locate most injuries and diseases of the cerebrum, were it not for the complicated nervous connection of the dura mater As Duret says "Their varied and, so to speak, protean manifestations tend at each step to complicate the whole symptomatology by superimposing themselves in the phenomena due to lesions of the nerve centres proper" More than this, every one knows that cicatrices of the scalp from old wounds often give the impression of depressed bone They are often sites of acute pain, may cause insanity, and partial paralysis and convulsions, from the fact that the dural branches of the fifth nerve are involved in the external cicatrices

In view of the fact that insanity so often follows fracture and depression of the skull, Dr Fletcher is inclined to inculcate the doctrines of Hunter regarding injuries of the head "As we cannot tell for certain at the time whether the symptoms arise from concussion, compression or extravasation of blood, it may be more advisable to trephine, as the operation can do no harm" That it is a safe procedure to make exploratory openings into the skull, through the dura, and tap the cortical substance with a probe or probe-pointed needle, most surgeons will readily admit And there is probably a great deal of force in Dr Fletcher's remark, that more surgical treatment in our hospitals for the insane would add to our percentage of cures

THE DEATH OF DR GUNN

MOSES GUNN, A M, M D, LL D, died at his residence in this city November 4, after several months of suffering from malignant disease of the stomach He was born in East Bloomfield, Ontario Co, New York, April, 1822, received a fair academic education in the schools of his native town, and in 1846

received the degree of M D at the Geneva Medical College, Geneva, N Y He commenced practice the same year in Ann Arbor, Michigan, and in addition to ordinary practice, he commenced giving instruction in anatomy to such students and practitioners as chose to attend his lectures

In 1849 the State University of Michigan, located at Ann Arbor, organized a Department of Medicine and Surgery, and Dr Gunn was appointed to the Professorship of Anatomy and Surgery, and commenced his first regular course in October, 1850 In 1854, he relinquished the course in anatomy, and restricted his teaching to surgery exclusively in the University until 1867 In the spring of that year he accepted an invitation to fill the Professorship of Surgery in the Rush Medical College in Chicago, made vacant by the death of Prof Daniel Brainard in October, 1866, and removed his residence to that city, where he entered upon the general practice of surgery and continued to fulfil the duties of his professorship until the close of the college term of 1886–7 During the seventeen years of his connection with the Michigan University, and the twenty subsequently with the Rush Medical College, Professor Gunn won and maintained a high reputation as a practical surgeon, a popular teacher, and a man of honor By his death, the College Faculty has lost one of the oldest and strongest of its members, and the community one of its most kind and skilful surgeons

THE CROWN PRINCE AGAIN IN DANGER

LONDON, Nov 7 —Dr Mackenzie, who has been suddenly summoned to San Remo to attend the Crown Prince of Germany, telegraphs to night "There is a recurrence of the growth lower down I am issuing unfavorable bulletins to night " It is thought here that it will be necessary for the patient to undergo another operation

BERLIN, Nov 7 —Drs Schroerer and Krause have been ordered to San Remo to consult with the English physician Prince William, son of the Crown Prince, also leaves for San Remo to night

PEDDLING AND PRESCRIBING GLASSES —DRS L WEBSTER FOX and G M GOULD have recently made a very timely and sensible plea for a law restraining peddlers, jewellers and opticians from prescribing glasses They cite many cases of injury, often permanent, to eyes from errors due to ignorance, and claim that such "opticians" should be as much under legal restraint as druggists

THE BRAINS OF THE INSANE —POGGI, says the *American Journal of Psychology*, examined the cerebral convolutions of fifty brains of the insane, and found anomalies more common than in the sane, especially in the left hemisphere The most frequent anomaly is a double calcarine fissure, or communication between the internal occipito parietal fissure and the sulci of the cuneiform lobule—30 per cent The brains of the insane are particularly characterized by numerous anastomotic folds

THE MEDICAL INVESTIGATOR —Dr S P Smith, of Louisville, Ky, proposes to publish a 24 page weekly, *temperance medical journal*, with this title, commencing on the first Wednesday in January, 1888, price $2 per annum We wish him and his journal abundant success

THE J B LIPPINCOTT COMPANY, publishers of *The Archives of Pediatrics*, edited by W P Watson, M D, announce that in the issue of the January number, 1888, will begin a series of articles on the "Therapeutics of Infancy and Childhood," by Prof A Jacobi, of New York

THE AMERICAN JOURNAL OF PSYCHOLOGY is the title of a quarterly journal the first number of which has just appeared It is edited by Professor G Stanley Hall, of Johns Hopkins University Its object is to record psychological work of a scientific, as distinct from a speculative character

NEW YORK STATE MEDICAL ASSOCIATION —The fifth special meeting of the Fifth District Branch will be held in the Pavilion Hotel, New Brighton, Staten Island, at 1 P M on Tuesday, November 15, 1887

SOCIETY PROCEEDINGS

MEDICAL SOCIETY OF VIRGINIA

Eighteenth Annual Meeting, held in Richmond, October 18, 19, 20 and 21, 1887

FIRST DAY

The Eighteenth Annual Session of the Medical Society of Virginia convened in the Capitol Building in the city of Richmond, Va, Tuesday night, 8 o'clock, October 18 A very large audience of ladies and gentlemen, not doctors, was present to witness the opening of the session The session was called to order by the President, DR BEDFORD BROWN, of Alexandria, Va After prayer by Rev S S Lambeth, of one of the Methodist churches in this

city, DR THOS J MOORE delivered the *Address of Welcome*.

THE PRESIDENT then introduced DR WM S CHRISTIAN, of Urbanna, Middlesex County, Va., who delivered the *Address to the Public and Profession*, and announced as his subject

SOME OF THE DIFFICULTIES IN THE WAY OF THE SUCCESSFUL PRACTICE OF MEDICINE

He classified the difficulties as either those that necessarily belong to the profession of medicine, and into those incidental thereto or produced by persons and things outside of the profession

DR WM D TURNER, of Fergusson's Wharf, Va., as chairman of the committee on nominations, presented a list of

SEVENTY-THREE APPLICANTS FOR FELLOWSHIP,

which the committee had approved, and on motion the gentlemen were elected Fellows

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WEDNESDAY, OCTOBER 19—SECOND DAY

After the usual routine proceedings of organization, Vice-President Dr Alex Harris, of Jeffersonton, was invited to assume the Chair

THE PRESIDENT, DR BEDFORD BROWN, of Alexander, then delivered the *Address of the President* His subject was

THE ADVANTAGES OF THE PRACTICAL STUDY OF MEDICAL SCIENCE AS A MEANS OF PROMOTING PROFESSIONAL SUCCESS

The proposition contained in the title was well sustained by facts and logical deductions

The next order of business being the discussion of the regularly selected subject, the appointed leader of the discussion, DR HUNTER MCGUIRE, of Richmond, read a paper on

THE CHOICE OF GENERAL ANÆSTHETICS

(See page 619)

On invitation by the President, DR WILLIAM A HAMMOND, of New York, said that while listening to the paper of Dr McGuire, he felt that he was sitting at the feet of a master And yet as he had had experience with both ether and chloroform, especially while a surgeon in the U S Army years ago, he felt that he had a right to an opinion on the subject under discussion, which he would take the liberty of expressing.

He had been one of the unfortunates who had witnessed two deaths from the surgical use of chloroform His first fatal case occurred about thirty-five years ago while he was serving as an assistant surgeon in the U S Army, out on the frontiers A dragoon had been drunk, and had very seriously hurt his arm He did not see the dragoon until about two weeks afterwards He then undertook to examine the injury by first placing the patient under chloroform Just as he was getting under the influence of the anæsthetic, the dragoon died *suddenly*

Previous to the administration, there was nothing to indicate that he could not take chloroform But upon post-mortem examination when his heart was taken out, and cut up into minute sections, and placed under the microscope, that organ was found to be undergoing fatty degeneration This condition could not have been recognized by the naked eye—it required the microscope to detect it Nor was the morbid condition sufficiently far advanced to allow of its diagnosis by physical signs or any of the usual symptoms of advanced fatty degeneration There is no way known to him by which such cases can be foretold, and yet he could not resist the conclusion that the fatty heart was the cause of that dragoon's death There was nothing else to possibly account for it The case was reported at the time in the *American Journal of Medical Sciences* The chloroform was carefully examined, and found to be good

The second case of death by chloroform under his observation occurred in Virginia Just after the memorable battle near Fredericksburg, during the late war, a soldier was brought in who needed exsection of the elbow The circumstances of the battle made it desirable that he "should be a little in in a hurry" Just as he was picking up his knife to begin the operation, the soldier died *suddenly*—without a moment's warning, exactly as Dr McGuire had described his case as dying Since then, he has not used chloroform much, but has adopted ether in preference Whether he had had remote deaths or not from the use of ether, he does not pretend to say—especially after what Dr McGuire has said about the more than possible after effects of its administration But this he has to say, that he has never been horrified by a sudden death while using it In fact, he does not think that he has ever had any bad effects from the use of ether He wishes he thought chloroform as safe to use as ether, for undoubtedly chloroform is much more agreeable both to the patient and administrator He wishes he could make more emphatic than Dr McGuire has already done, the great importance of not being in a hurry when about to give chloroform For army uses, ether he thinks, is unquestionably to be preferred

As to how these anæsthetics kill, he is unable to satisfactorily explain Chloroform undoubtedly kills by stopping the heart's action in the majority of cases, but why, he does not know As to ether, its immediate dangers are so much less than chloroform that he prefers it As to the after effects of this agent, Dr McGuire is most probably correct in saying that deaths are due to it that are not attributed to it in the mortuary tables

Some years ago a Frenchman proposed venous injection of chloral hydrate The anæsthesia lasts from seven to eight hours Dr Hammond has adopted this anæsthetic in only one case It was a case in which he determined to stretch the sciatic nerve He injected a solution of chloral containing 7 grains of chloral into the cellular tissue, instead of making it intra-venous Anæsthesia followed in a few minutes and lasted five hours, with sleep, most if not all the time The nerve was stretched according to the usual method without any sensation of pain

Another good anæsthetic is *hypnotism*, but this is liable to much abuse in the hands of charlatans The patient hypnotized is not absolutely insensible, but the cutting of the surgeon cannot be said to be painful It does not seem that more than about one in five or six are proper subjects for hypnotism, and it cannot well be determined who are fit subjects until the experiment is made upon the individual The process is not due to the party who operates, but to the susceptibility of the person to be acted upon

Dr George H Rohe, of Baltimore, Md, an invited guest, said he was much pleased with the fair manner in which Dr McGuire had opened the discussion As to the danger of paralysis of the heart during chloroform administration, he thought the proper explanation might be that given by Brunton Chloroform paralyzes the vaso motor centres, while, during ether narcosis, the vaso motor centres continue active for a much greater length of time As to the rarity of deaths from chloroform given during labor, he thought Barnes' explanation a satisfactory one It is that during gestation, the heart undergoes a conservative hypertrophy, and hence has greater power to resist the paralyzing influence of chloroform This condition of the heart does not occur usually in cases that are brought to the attention of the surgeon for operation Generally speaking, in such cases, the disease or injury demanding the use of the surgeon's knife is such as to impair the tone of the heart, either for the time or permanently In surgical cases, also, the dread of the anæsthetic or the manner of its administration acts as a shock to the nervous system As to the prevalent opinion about the immunity of children from the dangers of chloroform, as remarked upon by Dr McGuire, Dr Rohé quoted from authorities to show that about one in ten of all deaths from chloroform occur in children under 12 years of age He thought, also, that Dr McGuire's statistics could stand correction as to the stage of the administration when the greatest danger presented He referred to authorities to show that about one half of all fatal cases from chloroform occurred either during the surgical operation or else immediately afterwards He believed it to be good doctrine to always advise the administration beforehand of a suitable dose of atropia with morphia This combination maintains anæsthesia, while it, at the same time, keeps up the activity of the vaso motor centres He agrees with Nussbaum in objecting to the use of ether before beginning with chloroform There have been two deaths from chloroform in Baltimore during the last two years He has given ether in the manner that Dr McGuire opposes But he has never seen the depressing effects upon the heart, but upon the respiratory organs To sum up, he believes ether safer than chloroform in the large majority of cases

Dr Herbert N Nash, of Norfolk, Va, said he has now changed his preference from chloroform to ether when an operation is to last over half an hour He believes chloroform kills chiefly by depriving the nervous centres of the requisite amount of oxygen He has seen distressing effects come from ether Contrary to Dr McGuire's opinion, he thinks the presence of pain has an influence in overcoming the paralyzing influence of chloroform In children, his experience has confirmed the preference expressed by Dr McGuire for chloroform

Dr J S Wellford, of Richmond, Va, said that during his service as surgeon in the Confederate Army, he could not get ether as freely as he wanted it, and hence had to use chloroform, and one death came under his observation That death was probably due to methylated chloroform, received from England Methylated chloroform is cheaper than ethylated The purity of the chloroform is, therefore, a very important matter Anxiety on the part of the operator, especially if he be in haste, may cause him to overdo the matter and "crowd" the chloroform so as to cause suffocation Ether is safer under such circumstances because it contains a very large percentage of oxygen Anstie has shown that air containing over 5 per cent of chloroform is dangerous Death has frequently occurred before commencing the operation after the administration of chloroform Given internally, it is a valuable anæsthetic, the full virtues of which use have not been sufficiently dwelt upon by authors Two thirds of the deaths from chloroform have occurred in the dental chair, showing the great danger of administering this agent while the patient is in less than the prone position One, if not the chief, reason why we do not have fatal cases in obstetrical practice is because chloroform is given to allay the suffering from "pains" that throw the blood into the cerebral circulation In surgical cases, there are no pains when the patient is under the influence of the anæsthetic Anstie has shown that the genito anal region and the matrix of the great toe are about the last regions of the body to become anæsthetized Hence operations about these parts require more chloroform than other cases, and hence the great number of deaths that occur from anæsthesia when these parts are to be operated upon The purity of the agent is an important matter, and the manner of administration is just as important Such was the harmlessness of chloroform administrations in the Confederate Army that hospital stewards, even, often gave it The secret was undoubtedly due to the fact that they were taught the importance of having a plenty of fresh air mixed with the chloroform during its administration There is danger in giving chloroform to those whose hearts have been overtaxed, as by alcoholism or prolonged intoxication Ether deaths are frequently attributed to intercurrent pneumonia, and therefore are not put down as deaths from the anæsthetic He ventures to assert that when the true record of deaths by anæsthetics is written up, as many fatalities, if not more, will be found to be due to ether, but they are of secondary occurrence His conclusion is that both ether and chloroform are dangerous, perhaps in about equal ratio Hence do not give either unless there is a clear indication for one or the other

Dr I S Stone, of Lincoln, Va, remarked that for operations requiring only a few moments, he preferred *bromide of ethyl* to ether or chloroform He thinks it much safer than chloroform, and it does not

carry with it the dangers attributed by Dr Wellford to ether

DR ALEX HARRIS, of Jeffersonton, Va, said he had used both ether and chloroform since their popular introduction into the armamentarium of the doctor As he has had no accident from chloroform, and as it is so much more agreeable than ether to give and to take, he saw no reason to surrender his preference for chloroform He always freely admits air during chloroform administrations He is not surprised at the record of deaths from its use by those who give it as they would give ether The agents are entirely different chemically, and call for different methods of administration As a complication of the prolonged or excessive use of chloroform, he has seen jaundice occur

DR J E CHANCELLOR, of the University of Virginia, said he has used, and been a close observer of the use of both the anæsthetics since their introduction He has settled upon the combined use of ether and chloroform as safer than either of the two alone, and says further that the combination acts more quickly He has also used the combination of one-third alcohol and two thirds chloroform, and asked Dr McGuire if he had any experience with such a combination?

DR MCGUIRE said that he had frequently used the "A C and E mixture," but has abandoned it because he gets some of the dangers of *both* ether and chloroform by its use, whereas the danger of either was as much as he is willing to be responsible for

DR CHANCELLOR said he had seen one death under the use of chloroform, but he is unwilling to testify whether the anæsthetic or the shock of injury killed the patient

DR W T OPPENHEIMER, of Richmond, Va, remarked that all cases of ether deaths are by no means recorded He had witnessed two deaths by this agent in New York City One of the cases was in the practice of Dr Keith The ether was being given for the operation of excision of the knee The other case occurred in the practice of Dr Bryant He has since adopted chloroform, and prefers it Chloroform is specially preferable if there is hæmorrhagic diathesis In fact, in a case of hæmorrhage from the lungs, bleeding was several times arrested for three or four hours by the repeated administrations of chlōroform

DR THOMAS R EVANS, of Mt Carbon, West Va, arose principally to say a word for the country doctor He is usually unable to carry around with him more than an ounce or so He has several times derived the desired anæsthesia by giving *chloroform internally* in teaspoonful doses This dose will sometimes anæsthetize for several hours at a time, and by common consent, this practice seems to be less risky to the patient's life He does not know why it is not more generally adopted

DR E W ROWE, of Orange C H, Va, has had no death from either, but has been scared by both, especially when administered soon after eating He inclines to a preference for chloroform, being always careful as to the time and mode of its administration

In answer to questions, DR HAMMOND said he has had no experience with rapid breathing as an anæsthetic, but has known it to cause convulsions simulating those of epilepsy As to chloral, the solution of 7 or 8 grains should be given as different injections in different parts of the body He has had one death from chloral The patient was in the habit of taking 20 grains three times daily After about a year or so of such habit, sudden stupor came on, and he died The exact manner of his death was uncertain

DR WM W PARKER, of Richmond, Va, thinks he was the first doctor in this State to use chloroform after its announcement as an anæsthetic One of his patients years ago had got in the habit of using it to such an extent as to use $3,000 worth in three years' time, and finally died from it Properly given, he thinks chloroform the safer of the two anæsthetics It should not be given from a cone or buttoned shirt cuff or anything else of the kind The safe way of administering it is for the patient to lie down, with clothing perfectly loose and using an open napkin or a suitably shaped sponge This is to be moistened with a few drops of chloroform as often as it evaporates, and held three or four inches above the nose and mouth In this way, all danger of not having enough of fresh air is avoided, and the patient is not overwhelmed, so to speak Exercise a little patience, and all will go well In this way, on one occasion, he gave chloroform almost continually, night and day, for three weeks, without an alarming or a threatening symptom

DR J GRAMMER, of Halifax C H, thought that prominent mention should be made of whiskey as an anæsthetic in such a discussion as this He referred to a case that came under the observation of Dr J Herbert Claiborne, of Petersburg, Va, in which a woman who was drunk passed entirely through all the pangs of labor without the slightest evidence or any after recollection of having had any suffering During the war, many wounded soldiers were operated on without suffering pain—the anæsthetic being whiskey, because of the lack of chloroform

DR W L ROBINSON, of Danville, while generally preferring chloroform, could not agree with Dr Wellford in thinking that the presence of "the pains" was the cause of the exemption of danger in chloroform administrations during labor We have pains of the severest kind in many surgical operations where the patient dies As to the matter of hæmorrhage being checked by chloroform, which has been referred to, he has known hæmorrhages begin in labor, after the use of this agent, which he saw no other way to account for than as a result of the use of chloroform

THE PRESIDENT mentioned a case which came under his immediate care some thirty years ago A boy, aged 17 years, was kicked by a horse, removing a large portion of the frontal bone, and injuring the anterior lobes of the cerebral hemispheres Singularly, the mental condition remained good, but the injury so exposed the brain to view as to allow of excellent opportunities for examination To apply the proper surgical dressings, it was necessary to resort to an anæsthetic to relieve the suffering A

mixture of chloroform and ether was used It was the first case on record where an opportunity was allowed to witness the effect of chloroform, etc , on the brain circulation With each administration of the anæsthetic the brain was seen to become anæmic—almost bloodless The natural pulsations were seen to gradually fade away as the anæsthesia became more and more profound, until finally the brain seemed almost bloodless The observations were repeated six times so as to confirm the fact that the condition was due to the anæsthetics Whether it was the chloroform or the ether that caused this condition of things he does not pretend to say, as neither was used alone

Dr McGuire, in closing the discussion, said that as to the dangerous symptoms that have been observed during the administration of anæsthetics, the profession agrees that ether is not so safe in diseases of the kidneys He had not undertaken the task of writing an exhaustive paper on the subject, but had tried to confine himself chiefly to some mooted points, in the hope of getting light on them He fully agrees with Dr Wellford that the purity of the agent, whether it be ether or chloroform, is a very important matter In dentistry there are two causes of danger One is the upright or only half reclining position in the chair, and the other is the inclination of the dentist to pull the tooth before there is complete anæsthesia Mr Keith, of Edinburgh, has used the Clover bag for ether administration for two hours or more at a time But such a bag for chloroform would be dangerous Dr D Hayes Agnew, of Philadelphia, has been unfortunate enough to recently add another to the death list from ether, and no one who knows his skill and caution can doubt for a moment but that the ether was properly given by him It simply illustrates that anæsthetics are dangerous, and should not be resorted to without sufficient justification for the use of such a powerful agent As a conclusion from his study of the subject, he believes that one anæsthetic is about as dangerous as the other, and that each should be selected on the principle of the special fitness of the subject for one or the other

(*To be concluded*)

CHICAGO GYNÆCOLOGICAL SOCIETY

Regular Meeting, Friday, June 24, 1887

The President, Chas Warrington Earle, M D, in the Chair

(*Concluded from page 604*)

Dr Bayard Holmes read a paper entitled

THE BACTERIOLOGICAL EXAMINATION OF AN EXTRA-UTERINE FŒTUS, AND THEORETICAL CONSIDERATIONS OF THE BACTERIOLOGICAL CONDITION AND FATE OF DEAD, RETAINED FŒTUSES

I These nine tubes of nutrient gelatin containing pieces of the different organs of an extra uterine fœtus was removed by Dr Christian Lenger, in the Milwaukee Hospital, on the 7th of March last The diagnosis of extra uterine pregnancy was made some months previous by Dr Senn, and the subsequent death of the fœtus was recognized by Dr Mickle The vagina had been rendered as sterile as possible before the operation by means of the antiseptic tampon and irrigation The incision in the posterior wall of the vagina was made with Paquelin's cautery, and a way opened between the rectum and vagina with dull instruments The sac about the fœtus was then cut through with the cautery, the short forceps applied to the presenting head, and the fœtus delivered Everything was done under the strictest antiseptic precautions The duration of the operation was about two hours The fœtus presented a very fresh and natural appearance, though it was a little softened It had been dead two months

As soon as the fœtus was delivered it was wrapped in a large piece of carbolized gauze, and conveyed to an adjoining room, where everything was ready for this examination Here the large cavities were quickly opened with the sterilized knife, and pieces of the various organs and their contents removed with instruments sterilized with heat These pieces were put in the liquefied blood serum gelatin, which was then allowed to cool Ten tubes were used in the examination One was unfortunately broken in the laboratory after it had been kept long enough to prove its sterility The culture medium was a 20 per cent solution of gelatin in peptonized beef tea, to which an equal quantity of sterile hydrocele fluid had been added This gave a medium which contained only 10 per cent of gelatin It coagulated if heated above 62° C , but had the advantage of being very nutrient and yet being liquefied by the action of certain bacteria

With one exception all of these tubes are, after almost four months, solid and unchanged One contains a piece of the skin cut from the abdominal wall of the fœtus Within 48 hours after implantation a small, white, liquefying colony was noticed at the side of the little piece of skin Examination showed that it was the *Bacillus subtilis* Now the gelatin is completely liquefied, and rendered turbid by the bacteria which have been mixed with it in transportation and handling There is no doubt but that this was an accidental infection either during or after the operation In the eight solid tubes remaining are some of the hair and sebaceous matter, the brain, an inch of intestine and its contained meconium, a piece of the heart, a piece of the liver, a piece of the lung, one of the phalangeal bones, and one perfectly transparent tube which contains a portion of the fluid from the abdominal cavity

This examination is conclusive evidence that the organs examined were free from any living bacteria or their spores that were capable of growing in the culture medium used If any evidence of the perfectly sterile condition of this fœtus and its membranes were wanting after it had been retained two months subsequent to its death in the abdomen of the mother, this examination would seem to supply that want Could we be certain that the culture

medium used would support the life of all bacteria, nothing more could be desired We may, however, safely assume that this fœtus and its intestinal contents were perfectly sterile

II —During the past ten years, the burden of bacterial research has proven conclusively that the healthy human body is free from all living micro organisms The fate of bacteria introduced into the circulation of healthy animals has received some attention It may be safely said that non-pathogenic bacteria cause no more disturbance than an equal quantity of finely divided, lifeless vegetable matter They are quickly taken up by the white blood-corpuscles, and eliminated by the lymphatic system, or remain imbedded in the reticulum of some of its glands

The pathogenic bacteria also, in some cases at least, meet with a similar fate, being unable to overcome the normal physiological resistance of the healthy host Thus even the *Bacillus anthracis* was shown by Feser to be unable to invade rats that had been fed on flesh, though, after having been restricted to a vegetable diet, the same animals fell easy victims to inoculations Birds, under ordinary conditions, resist inoculations of anthrax Pasteur has shown that this due to the high temperature of the order, which is little below the limit of multiplication of the bacillus in artificial culture media If the temperature of the fowls is reduced two or three degrees by immersing the lower portion of the body in cold water, they become susceptible to inoculations Passet finds that the *Staphylococcus cereus albus* and *flavus* produce no action when injected into the injured subcutaneous tissues of animals, although they produce suppuration in man Max Schuler concluded from his experiments on animals, even before the true bacterial origin of tuberculosis had been demonstrated, that the infection of bones and joints did not take place, as a rule, after injection of tuberculous matter into the circulation, without previous contusion of the selected part, or its irritation by injected chemicals Kœnig arrives at the same conclusion from a clinical consideration of tuberculosis It is probable, therefore, that the bacilli in the circulation are eliminated or destroyed

When pathogenic bacteria are introduced into the blood-current after the mechanical or chemical injury of some selected part, they multiply only at this point of diminished physiological resistance, although their presence can be demonstrated in other parts of the body According to Huber, the *Bacillus anthracis* multiplies entirely within the blood vessels in which stasis has been produced In distant parts of the body, only scattered, single, non-vegetating individuals are found, and these are frequently contained in the reticulum of white blood corpuscles That these scattered bacteria are alive has been shown by Rosenbach in the case of the *Staphylococcus albus* by means of culture methods Huber found the bacteria never passed outside of the blood-vessels into the œdematous or suppurative (?) exudate

The resistance of the blood may be so low that multiplication of the invading microbe takes place in the circulating blood itself Such a condition is clinically termed septicæmia in distinction from sapræmia and pyæmia It usually follows one of these conditions It may, however, be due to the invasion of a peculiarly powerful bacterium, or an unusual susceptibility in the part invaded

Nearly all bacteria, under certain circumstances, resort to a method of development and reproduction called spore formation It begins with the appearance of a very small granule in the protoplasm of a hitherto vegetating cell This granule increases in volume, and becomes a strongly refracting sharply outlined body, which rapidly reaches a definite size, and then represents a perfect spore The spore is always smaller than the mother cell The protoplasm and former contents of the cell disappear in proportion to the growth of the spore Finally, the spore appears in the delicate membrane of the mother cell suspended in a clear, watery fluid only. The causes of spore formation are not yet fully known in all species In some it seems to depend upon the unfavorable condition of the nourishing medium, while in others it bears no relation to vegetation Spores endure vicissitudes of heat and cold and chemical action better than vegetating cells, and also resist the action of staining fluids

It is probable, though, so far as I know, yet undemonstrated, that the pyogenic bacteria leave behind in the cicatricial tissue after suppuration such lasting spores Of this there is abundant clinical evidence in the case of such diseases as pneumonia, rheumatism, osteo-myelitis, and erysipelas In individuals that have once been subjected to an attack of one of these diseases, sudden outbreaks of the long absent disease follow slight causes which tend to produce a diminished physiological resistance

The fate of bacteria in the circulation may be thus summarized

1 They may be wholly destroyed without multiplication

2 They may multiply at one or two points of diminished physiological resistance, and remain only scattered and non-vegetating in other parts of the body

3 They multiply in the general circulation everywhere

4 After localized multiplication, they may produce lasting spores which remain a long time imbedded in the cicatricial residue and, at some later period, under favorable circumstances, these may again germinate and multiply, and give rise to their own peculiar form of inflammation

I recognize the fact that the formation of spores in the living body has yet to be demonstrated, but it seems to me that the clinical evidence is sufficient, when considered with the well known laws of spore formation in exhausted artificial culture media, to warrant this assumption for theoretical purposes

3 When dead animal tissue is introduced into the living animal body, it produces no considerable inflammation A multiplication of the surrounding cell elements takes place, with increased vascularization The dead tissue is invaded, taken up in part by white blood-corpuscles, and carried away There may be a greater or less residue, surrounded by a

mass of cicatricial granulations The neighboring lymphatics may contain portions of the more resist ing and often pigmented residue We see this removal illustrated every day, as Senn has shown in the case of catgut ligatures When they are perfectly antiseptic, they never give rise to any undue inflammation or suppuration Again, the same process is observed in subcutaneous operations, in cerebral hæmorrhage, hæmorrhage about simple fractures, and into the large joints The completeness of absorption depends, in these cases, upon the amount of the hæmorrhage, and the age and nutrition of the individual Suppuration or other unfavorable results take place with extreme infrequency

The fate of a retained, dead fœtus, therefore, whatever its position, must depend almost entirely upon its bacterial condition If it contain no pyogenic or putrefactive bacteria, one would expect it to produce no more inconvenience than would result from its size and weight It may become macerated, mummified, or calcified By pressure atrophy, it may find its way into the intestinal tract It may be discharged with a living fœtus It may later become infected, and give rise to all the serious consequences of suppuration Or, it may be artificially removed

IV —There is little doubt that the living fœtus is free from all micro organisms Leopold put young fœtuses into the abdominal cavities of rabbits under strict antiseptic precautions, and found that they gave rise to no suppuration They were either wholly or partly absorbed, or they remained unchanged, or they were reduced to a small residue resembling lithopedia Had these fœtuses contained any living pyogenic bacteria or their spores, the warmth of the abdomen and the absolute lack of resistance in the dead fœtuses would have resulted in their rapid destruction, and in suppuration in the living tissue about Kuchenmeister has collected a large number of cases in which extra uterine fœtuses have remained in the human abdomen many years, sometimes almost unchanged, and at other times in various states of absorption

Of all parts of the fœtus, the meconium, being itself without possibility of physiological resistance, would be most likely to show the presence of infection Its infection might take place either through previous infection of the amniotic fluid from the mother's circulation, or through infection of the fœtus by way of the placenta The amniotic fluid might be infected more easily than the fœtus, as it has been shown by Wiener that when coloring matter was injected into the circulation of the mother, the amniotic fluid was stained at the end of a few minutes, and the meconium was also soon colored by the swallowed fluid, while at the same time not a trace of coloring matter could be found in the kidneys or other organs of the fœtus We might also suppose that occasionally the amniotic fluid would be infected from the interior of the uterus itself, as the lymphatics of the amnion have been shown to be connected directly with those of the uterus Escherich has examined bacteriologically the meconium of three infants that died during birth Within a few hours after the birth of the fœtuses, their abdomens were opened under every indicated precaution, and double ligatures put about one or more loops of intestines These were then washed with a sublimate solution, and opened with a sterilized knife From the contents of these loops, inoculations were made in peptonized beef tea gelatin, and in liquid sterilized blood serum After incubation for several weeks, no change was discernible, so that in these three cases at least, the intestinal contents were free from any micro organism that would grow in the mediums used The same experimenter found the meconium of infants that lived only a few hours infected by very few kinds of bacteria, and these in small numbers, but if the child lived a day or more, the individuals, as well as the species, became quite numerous There is no doubt, therefore, that it furnishes abundant nutrition Breslau has shown that the presence of swallowed air in the intestines of newly born infants can be demonstrated very early by means of percussion Escherich considers that the meconium is infected by germs swallowed with the air and dust, in the first efforts of sucking

The examination of the meconium chemically, while less reliable than the preceding method, furnishes a valuable confirmation Search was made by Forster, Zweizel and Muller in the meconium of still born, for products of putrefaction such as indol and phenol, with negative results

Thus by three separate methods the fœtus has been shown to be free from all micro organisms, and, therefore, when retained in the body of the healthy mother after its physiological or pathological death, is incapable of giving rise to suppuration or destructive inflammatory disturbances

5 It frequently happens in twin pregnancies within the uterus that the death of one of the fœtuses results after it has attained a considerable size In these cases the dead fœtus and its annexa seldom give rise to suppuration or inflammation, or hasten in any manner the delivery of the still living infant At times, also, fœtuses at full term are retained a long time within the uterus, through one cause or another, without producing any unfavorable result

Bandl cites thirty cases of pregnancy in a rudimentary horn of the uterus, seven of which were retained six months or longer, and in no case did suppuration ensue It would doubtless be difficult to diagnose a tubal pregnancy from one in a rudimentary horn, even on the cadaver, after any considerable suppuration This may account for the limited number of observations of this occurrence

Since infection of a dead fœtus in the uterus or in a rudimentary horn is such a rare occurrence, the infection of a fœtus outside this organ and far removed from infection from the interior of the uterus, the cervix, or the vagina, one would expect to be much more rare

Unfortunately, this *a priori* conclusion does not seem to be verified by experience Kiwisch collected 100 cases of extra uterine pregnancy of all kinds, and it appears from the summary of his cases as given by Bandl that about 37 per cent of these fœtuses became infected

Seventeen died of peritonitis more or less acute, 4 died of peritonitis after the fœtus had been long retained, 9 died through a long continued suppuration and perforation, 7 recovered after spontaneous elimination Hecker collected 132 cases, out of which it seems that about 47 per cent became infected, 18 died of hectic, 12 died of peritonitis, 28 recovered after discharge of the fœtus through the rectum, 15 recovered after discharge of the fœtus through the abdominal wall

Out of 500 cases of extra uterine pregnancy collected by Parry, 248 went to or beyond the full term, and, out of this number, seventy fœtuses were discharged either through the rectum, the vagina, or the abdominal wall The history of most of these cases shows that this issue was brought about by suppuration, and consequently through infection Thus, in Parry's cases, 28 per cent can be considered as infected During the first year, 12 per cent of the whole number terminated in suppuration, during the second year, 5 per cent, during the third year 2½ per cent After this time, less than 2 per cent were infected each year

The examination of the statistics from all these sources would lead one to think that there are some sources of infection of dead extra uterine fœtuses which are not present in cases of cerebral hæmorrhages, pelvic hæmorrhage, hæmorrhage into the large joints, or about simple fractures In these cases absorption is the rule, and infection and consequent suppuration rarely take place

6 The three possible methods of infection which seem to be worthy of consideration are the following 1 Infection of the fœtus before its death, and subsequent suppuration 2 Simple auto infection, so called 3 Infection through the proximity of pyogenic bacteria or their spores left behind from some previous suppuration

The first of these methods seems hardly worthy of consideration The difficulty of the passage of the microbe from the infected blood of the mother is clearly shown by the experiments of Bollanger He injected into the blood of pregnant sheep the living anthrax bacilli After a sufficient time had been allowed for the disease to show itself, the animal was killed The fœtus was then removed, and found perfectly free from bacteria Klotz found in the whole literature only six cases in which the fœtus was infected with measles during intra uterine life

A simple auto infection certainly cannot account for such a large per cent of infection of extra-uterine fœtuses, since we have seen that this is such a rare occurrence within the uterus itself and in the rudimentary horn It has been impossible for me to find any statistics relative to the frequency of infection of hæmorrhagic products in different parts of the body I can only appeal to the experience of every surgeon to testify for me that it is extremely rare The consideration of Parry's cases in which a large per cent became infected during the first year, with a gradually diminishing percentage afterwards, is, in itself, quite significant, and shows plainly that whatever the source of infection is, time alone is a very insignificant element

I now pass to the third possible source of infection Leitzman considers the contiguity of septic germs as a possible source of infection in these cases, and Spiegelberg declares that lithopœdia may excite suppuration, and that the frequency of this issue is encouraged by labor There seems to be one factor which Bandl admits to be largely concerned in the etiology of extra uterine pregnancies which has not received consideration I refer to the presence of residues of old inflammations in close proximity to the dead fœtus There is every reason to believe from the consideration of Martin's researches and compilation that these residues which result in the occlusion of the tubes and consequent pathological fetation, are the result of septic or infected inflammation, and it is probable, although, as I have said, yet unproven, that these residues, in a large majority of cases, contain lasting spores By pressure atrophy from the weight of the dead fœtus, these are brought into connection with a large and rich pabulum, in which they germinate and multiply, and from which they infect the surrounding living tissues In these they give rise to suppuration, which infiltrates the connective tissue in the direction of the least resistance, and subsequently spontaneous elimination of the fœtus may take place There seems to be but one thing to be proven to render my consideration of this most potent cause probable It remains to be shown that spore formation in pyogenic bacteria does take place within the living human body, and that these spores are left behind in the cicatricial tissue resulting from suppurating granulation

7 If further investigation and research should prove the presence of lasting spores in previously infected tissues and the possibility of their causing subsequent suppuration, their presence should be considered when operating for the removal of living or dead extra uterine fœtuses, or for diseased tubes In case any doubt of the sterility of such a fœtus or its surroundings should exist, the fear of the presence of lasting spores would be an additional indication for the use of the antiseptic drain, and the treatment of the sac as an abscess cavity

It would also render the prognosis less favorable in cases where it is deemed advisable to produce death artificially, early in the life of such an extra uterine fœtus Especially should caution be exercised in case of puncture, as this means might make a way, and, at the same time, furnish a material for the latent spores about

PHILADELPHIA COUNTY MEDICAL SOCIETY

Stated Meeting, September 28, 1887

THE PRESIDENT, J SOLIS-COHEN, M D, IN THE CHAIR

DR A C W BEECHER reported a case of

COMPOUND FRACTURE OF THE HUMERUS AND INFERIOR MAXILLA, AND OTHER INJURIES, FROM A FALL

F L, female, æt 4 years On May 20, 1885, fell

from the third story front window of her home into an area leading into the basement, a distance of 38 feet, in her descent she probably struck an iron railing on the steps (which were winding) leading to the front door, which railing was somewhat movable from side to side, having become loosened at one end As no one saw her falling, it is not known precisely how she struck She was immediately removed to a hospital, where her wounds were dressed, and in two days her mother removed her to her home, and Dr G W Sparks, the family physician, was sent for, with whom I was subsequently associated in the treatment of the case On May 24 I saw her for the first time with Dr Sparks, and as she seemed quite comfortable, and the dressings in place, we did not remove them, but on a subsequent visit, not knowing the character or extent of the injuries, and the discharges being profuse and offensive, the dressings were removed, and then we found a deep, lacerated wound on the thoracic side of the right axilla, about 4 inches in length, extending from in front of the margin of the tendon of the pectoralis major muscle, backward to behind the tendon of the latissimus dorsi, and both of these tendons were somewhat torn (the wound had been brought together by several interrupted sutures when dressed at the hospital, but these had cut out and I did not replace them) No fracture of the ribs, but a fracture of the humerus, probably an epiphyseal separation of the head of the bone from the shaft, as it seemed to be in that situation A contusion on the posterior surface of the shoulder, over the head of the bone, developed a slough and abscess, which was drained by a seton into the wound in the axilla, so as to prevent the burrowing of pus The arm was left to hang in a line corresponding with the long axis of the body, and the lower part of the arm and forearm were firmly strapped to the chest by adhesive strips, absorbent cotton and iodoform were placed in the armpit and over the shoulder, and bandages applied over the strips in such a manner as to leave the shoulder bare and the armpit accessible, a felt shoulder splint, well padded, was then applied to fix the shoulder, and a bandage over the whole The outer bandage and the splint had to be removed about once in two days to permit the treatment of the wounds underneath, they were washed out by injecting a solution of carbolic acid The under bandages were only removed when they became displaced or were too much soiled

A small bruise was noticed on the right side over the crest of the ilium, this gradually degenerated into an abscess containing about an ounce of pus An examination did not discover any dead bone, a drainage tube and carbolized cotton were applied, and in due time the abscess healed very kindly

About three weeks after the injury my attention was called to a small tender spot and swelling on the under side of the lower jaw, to the left of the symphysis An examination showed that some teeth in the lower jaw near this point had been broken off in the fall, and that one or two loose fragments remained, which I removed with dressing forceps There was no evidence of complete fracture of the jaw, no displacement, and no crepitation, yet an abscess developed, which was opened externally Ether was administered for the better examination of the jaw, and a communication was found to extend from the external wound through the jaw into the mouth, and that there were evidences of dead bone, several fragments of which, and two permanent teeth not evolved, were removed, after which it healed up rapidly Special directions that only liquid food should be administered, so as not to complete what certainly was a partial fracture of the jaw, which the act of chewing would have tended to bring about

The shock in this case was quite severe and an irritative fever set in, the discharge of pus was profuse, the appetite was capricious and poor, all of which produced rapid emaciation, and her life was threatened A liberal administration of quinia sulph in syr glyc c, whiskey, dessertspoonful every three hours, milk, eggs, and beef tea, rigidly insisted upon, she soon rallied The wound under the arm gradually closed, leaving a neat cicatrix, and about July 1 slight passive motion was instituted, which showed that there was little stiffness in the joint, that the cicatrix held to a slight extent the tendons of the pectoralis major and latissimus dorsi muscles, restraining their action somewhat, there was also a lack of power in some of the other muscles of the chest, either for want of use or because they had been injured in the fall

In the latter part of July the child was taken to camp meeting, tripping over a board, she was thrown upon her injured shoulder against a large stone She was brought home, and an examination revealed crepitation at the point of original separation The arm was again bandaged to the body, the splint applied to the shoulder, and a recovery soon followed She had had several other falls before and after the above mentioned, but with no bad results to the injured member

We have supposed that in the descent from the window the arm was extended from the body in the endeavor to save herself, that her body struck the railing, producing the laceration, with the arm on one side of the railing and the body on the other, that the body was turned by the resistance, the leverage throwing the force against the humerus near its head, and the leverage of the arm and forearm produced the separation of the head from the shaft The mobility of the railing, together with its angle of inclination, doubtless broke the force of the direct fall from the window, materially reducing it by the time she reached the area, and probably saved her from instantaneous death How and when in the descent the other injuries were produced is mere conjecture, probably on the steps in the area

It seems almost providential that she was not instantly killed, and that she did not perish from shock and septicæmia, the large vessels and nerves of the axilla just escaped most serious injury, which will account for the saving of the arm from gangrene or amputation, or both

She has recovered, with great mobility of the arm at the shoulder joint, which will be further increased as the products of inflammation become absorbed, and from use of the limb

DR O H ALLIS said I think that inasmuch as this was a compound fracture, it would have been good surgery to remove the detached epiphysis The fact, however, that good union and good motion were obtained, seems to show that this would have been an error It is also stated by authors that, where separation of the upper humeral epiphysis occurs, this portion of the bone undergoes necrosis, its blood supply not being sufficient to support it The result of Dr Beecher's case would seem to indicate that this also was incorrect

DR BEECHER said I am not prepared to say positively that this was a case of epiphyseal fracture or separation, though I believe it was—the injury was so high up I should like to ask if any observations have been made with reference to the growth of the bone subsequent to epiphyseal separation?

DR H R WHARTON said I had a case at the Children's Hospital some time ago of a compound fracture high up in the humerus The upper end of the lower fragment projected into the axilla a distance of two inches An inch and a half of the lower fragment and a spiculated fragment attached to the head of the bone were removed The fracture was then reduced and dressed antiseptically and the case did perfectly well In four weeks there was perfect union and perfect motion In this case the question came up whether or not there would be sufficient nutrition to keep up the vitality of the head of the bone It was decided to make the attempt to get union, for if necrosis occurred it would be a simple matter to remove the head of the bone In connection with Dr Beecher's question, I can say that in severe cases of epiphyseal fracture which I have had under observation for several years, I can detect no difference in the length of the humeri of the two sides

(*To be concluded*)

LA SALLE COUNTY (ILL) MEDICAL SOCIETY

Meeting of May 10, 1887

DR J O HARRIS, of Ottawa, Ill, read a paper on

THE PRODUCTION AND USES OF MOIST HEAT IN THE TREATMENT OF DISEASE, OR AN EFFICIENT MEANS OF PRODUCING SPEEDY DIAPHORESIS

He described his method of developing moist heat, and illustrated its practical application substantially as follows Get a tinner to make a round tin box, eight inches in diameter and four inches deep, have him attach an open handle or socket three inches long and one and a quarter inches in diameter on one side near the top, attach a hinged cover perforated with one half or five eighth inch holes, bend at right angles two pieces of tin doubled, half inch in diameter, across the cover, then put a wooden handle fifteen inches long, in the socket, and your apparatus is ready Being called to a case presenting all the symptoms of a congestive or pernicious chill, he sends a messenger for a quantity of unslacked lime, and while waiting his return gives the patient ten grains of Dover's powder, and has some woolen sheets or blankets brought and his patient placed between them As soon as the lime is at hand he partly fills the tin box with it, pours over it a pint of hot water, closes down the cover, places the box between the patient's legs, and tucks the blankets down close around the patient In ten minutes he says the chill has disappeared and the patient is bathed in profuse perspiration In half an hour he allows the moist flannel sheets to be removed and replaced by dry warmed cotton ones, and directs the necessary antiperiodic remedies for preventing a recurrence of the chill Dr Harris further illustrates the efficiency of his method by the two following cases

Miss F F D had been out on a damp, chilly day while "unwell," with thin shoes, and her monthly flow was suddenly stopped, followed by terrible pains in the pelvis and loins The use of the tin sweat-box with lime in the manner previously described, speedily induced profuse general perspiration with relief of pain, and in a few hours the menstrual flow had returned

The other was N C, a merchant with an unusually severe attack of acute rheumatism, caused by a thorough wetting while out hunting and overtaken by a cold rain Being called the next evening, and finding the patient suffering intensely, he gave him at once a powder composed of pulv opii grs iss, nit pot grs x, and pulv zinziber grs ij, and went out for his sweat box and lime Returning he applied it between the legs of his patient under woolen coverings, in the same manner as previously described At first the patient was disposed to ridicule the remedy, but soon admitted that it was getting warm, a little later asked to have some of the heat "let out," and finally declared he was being "cooked alive" "The result of the operation was that in less than an hour my patient was free from pain, and by noon the next day was walking around the store"

FOREIGN CORRESPONDENCE

LETTER FROM LONDON

(FROM OUR OWN CORRESPONDENT)

St John Ambulance Association—Salicylate of Mercury—Salicylate of Lithia—Visceral Symptoms in Acute Rheumatism—Ether an Adjuvant to Strophanthus—Homœopathy in Liverpool—Loss of the Nails in Telegraph Operators

The work of the St John Ambulance Association has attained a magnitude that could hardly have been anticipated at the time of its commencement in 1877 The Annual Report of that organization shows that it has established administrative centers in all parts of the World Its object is to disseminate sound information as to the best means of affording first aid to the injured Ten years ago its benefi-cent proposals were received with very general reserve To be able to give trained and intelligent assistance in case of accident was obviously very desirable for everybody, but the practicability of rendering the generality of persons capable of doing

so seemed to many very doubtful The Association has now 270 administrative centers and considerably over 100,000 certificated pupils, all of whom have passed through a course of instruction fitting them to deal in a skilful and rational method with any of the ordinary accidents of life until professional aid can be procured Last year 15,751 "First Aid" certificates were granted, 8,869 having gone to men students, and 6,882 to women There is something perhaps slightly fantastic in this Association setting up classes in China to show the natives how to deal with a broken leg or a dislocated ankle until the doctor arrives One such class was last year established at Kaiping Mines, 80 miles from Tichtsin An ambulance corps was also established in connection with the Midland Railway's carriage works at Derby, and also classes were trained of Metropolitan Railway employès at Baker Street Station This organization is certainly proving immensely useful to the police in various parts of the Kingdom and the Metropolitan men appear to be taking to the training with very creditable zeal Its practical utility received signal illustration on the day of the Jubilee service when no fewer than from 500 to 600 casualties were treated

Two new salicylates have been recently introduced into therapeutics, salicylate of mercury and salicylate of lithia. Salicylate of lithia is insoluble, and the best method of obtaining it is to act upon the carbonate of lithia by salicylic acid as follows twenty grams of the carbonate suspended in distilled water, are placed in a porcelain dish, and the mixture slightly warmed, whilst the salicylic acid is gradually added as long as any carbonic acid is evolved This will take about eighty grams of commercial salicylic acid as pure as possible Consequently the lithia salt of salicylic acid, contains about three sixths of its weight of the latter When the evolution of carbonic acid gas has ceased, there is found an abundant and dense precipitate, this is washed with distilled water and dried It is recommended to use this salt at the dose of three grams every two hours, increasing or diminishing the dose according to the case

The salicylate of mercury is a greyish white color, insoluble in water, and up to the present has been found a good preparation for being made into ointments, one to twenty five of vaseline

Dr William Robinson has drawn attention to an interesting case of acute rheumatism under his care, in which the visceral affections eclipsed those of the joints It occurred in a young woman aged 17 years When first seen she was in bed with severe pain in abdomen, increased on pressure, pulse 110, temperature 99 4° F and all the symptoms of acute peritonitis There were no signs of pelvic or renal disease and normal menstruation had ceased five days before For the first week pain was kept under by opiates, the temperature rose to 103° and the breathing was altogether costal At the end of the week severe pain paralyzed the right knee, it became very tender but was neither red or swollen, the temperature rose to 104°, and signs of pericarditis developed After two days the left shoulder was attacked with acute pain, also without redness or swelling, the right knee at the same time becoming free In a few days the left elbow followed suit As the pericarditis developed, the abdominal symptoms gradually subsided but double pleurisy with effusion came on At the end of the second week the pericardial mischief greatly increased, the heart impulse being felt on a level with the nipple From this time up to the end of the fifth week gradual improvement took place, the abdominal tenderness, tympanites and increased heart dulness had almost gone and the temperature and pulse had become normal, when a relapse of peritonitis recurred and pain returned to her left shoulder, the patient again suddenly recovered, but was left with a systolic bruit Dr Robinson drew attention to the extreme rareness of peritonitis occurring in acute rheumatism, the affection being chiefly mentioned and described by French writers

Dr T Broadbent finds that the addition of ether to the dose of strophanthus of great use in cardiac affections When he first used strophanthus in cases of heart disease he was invariably unfortunate in his results until ether was used in combination, recently in a case of very bad double pneumonia, with heart failure he combined strophanthus with an expectorant, the case got rapidly worse, the respiration going up to 65, the pulse to 130 and the patient became cyanotic As a last resource strophanthus and ether only were given, the symptoms began to abate immediately and the patient made a rapid recovery

The new homœopathic hospital has been formally opened at Liverpool The erection of an institution to be devoted entirely to homœopathic treatment of disease was decided on three or four years ago by Mr Henry Tate, the well known sugar refiner It is at present intended to contain fifty beds, but capable of being enlarged to contain twenty or thirty more There are large male and female wards, convalescent rooms, two infectious wards, completely isolated from the rest of the building, separation wards and private wards, together with carefully arranged offices, medical officers' and nurses' rooms, etc The greatest possible attention has been paid to the drainage and the means of warming and ventilation. Ever since the first homœopathic dispensary was opened in 1841, Hahnemann's form of treatment has been growing more popular in Liverpool In 1867 a second dispensary was opened and in 1885 the in-door and out-door patients treated at these establishments numbered 78,881 or a weekly average of 1,516 The cost of the building has been £20,000 The day preceding the opening the twenty third annual conference of "homœopathic" practitioners was held in the building, and much stress was laid on the want of a first class "homœopathic" surgeon, and hopes were expressed that one would speedily arrive in Liverpool

A new ailment is stated to have shown itself among telegraph operators, namely the dropping off one after the other of the finger nails, two cases have recently occurred in otherwise healthy subjects, the curious affection is thought to be due to the constant jar caused by hammering and pushing with the finger ends in working the Morse system of telegraphy

DOMESTIC CORRESPONDENCE

CATHETERIZATION OF THE EUSTACHIAN TUBE

Dear Sir —In THE JOURNAL of October 15 there was published a letter from Dr Enfield concerning the faucial method of introducing the Eustachian catheter The doctor cauterized the Eustachian tube per fauces because the nasal septum was so deflected as to render the introduction of the catheter through the inferior meatus impracticable It did not seem to occur to him, and I have observed that it does not to many others, to catheterize through the opposite nostril, to the advantage of which the deflection has taken place This can be accomplished in the majority of cases, and obviates the necessity of introducing the catheter through the mouth and fauces Deflected septa and hypertrophied turbinated bodies are very common in adults, and often constrict the inferior meatus to such a degree as to make it very difficult to insert the catheter of ordinary calibre In such cases the smallest silver catheter, with the beak but slightly curved, may often be passed by engaging the point under the end of the inferior turbinated body, rotating the catheter upon its axis, elevating its proximal end and, at the same time, carrying the instrument backward toward the orifice of the Eustachian tube After placing the catheter in the initial position, if one allows it to direct its own course, as it were, when it meets with obstruction, it will generally find its way through, even if the spiral line pursued by the beak quite describes a circle There are cases in which the unyielding silver catheter cannot be introduced, where we may succeed with the small hard rubber catheter, the flexibility of which permits of its easy adaptation to considerable inequalities and curves in the inferior meatus

These facts are mentioned for the benefit of any cases that cannot be catheterized through the nostril opposite to the tube we wish to reach However, those cases must be rare in which it is impossible to pass a catheter through one or the other nostril, for, as common as deflection of the septum and hypertrophied turbinated bodies are, I do not recall a case in which it was not possible to catheterize through one meatus It should not be forgotten that a curve of the septum toward one nostril increases the capacity of the other, and with the amount of thickening of the septum which usually accompanies this deflection there is left ample room for the entrance of a small catheter Another important point must be observed In order to reach the Eustachian aperture through the nostril of the opposite side, the beaks of our catheters should be given a curve describing an arc of a greater circle than we find in them as they come from the instrument makers This curve should be sufficient only to reach the orifice of the opposite Eustachian tube, otherwise it will impede the passage of the catheter through the nostril

I have practiced this method for several years, and have found it appreciated by patients, inasmuch as it removes one half the discomfort of treatment and saves time The success attending this method may be easily demonstrated by means of the auscultating tube

That catheterization per nasum is more simple and more certain of success than per fauces, except in case of cleft palate, needs no elucidation Very truly yours, S S BISHOP, M D

719 W Adams St , Chicago

SUDDEN DEATH FROM HEART DISEASE

Dear Sir —On September 27 Dr J E Chandler, æt 27, of Rowley, Iowa, while in his office and in the act of placing upon the table a pair of tooth forceps with which the moment previous he had extracted a patient's tooth, fell instantly dead without uttering a word or sound Dr Chandler was a recent and specially competent young graduate in medicine, and a former student in the office of Dr G G Wilson, of this city

Some years ago the deceased suffered a severe rheumatic attack, although not arthritic in type For two or three years he has developed heart symptoms, including a mitral systolic murmur This condition was not of sufficient gravity to interfere with his business and was, in fact, unknown by most of his intimate friends Some four weeks previous to his death he was examined by the writer for a suspected organic liver trouble, the functions of the liver being impaired, with loss of appetite and nausea The liver was found normal, and with the use of usual treatment the symptoms rapidly abated and, aside from some remaining debility, the doctor had recovered his former and usual condition At the examination referred to he made no allusion to his heart, and nothing in his appearance, or symptoms with which he complained, then directed attention to it There was no autopsy

Will some one explain how a lesion of the heart so slight in its previous effects can produce instant death? H C MARKHAM, M D

Independence, Iowa

PLEASE WRITE PLAINLY

Dear Sir —Through the recent offer made in your advertising pages to send our complimentary sample of Platt's Chlorides to any physician still unacquainted with it, we have received many hundreds of requests, which we have complied with, with pleasure But there will be a few who will be disappointed by reason of their own carelessness or thoughtlessness in writing, it having been either impossible to decipher the name or the P O address, or the latter has not been fully given For instance, one physician gives his P O address as simply Harper's Ferry, not naming the State There being a Harper's Ferry in Iowa, one in Kentucky and another in West Virginia, it was impossible to tell where to send our sample, as, in this instance, the physician's name was not in any of our directories, and the post mark was entirely obliterated We will continue our offer to send samples (expressage prepaid by ourselves) for a

few weeks yet, and would kindly ask those requesting same, to enclose their card, or to write on a letter head giving the name and address in print

Most respectfully,

HENRY B PLATT

36 Platt St , New York

NECROLOGY

DAVID RICE M D

DAVID RICE, M D , of Leverett, Mass , was born of humble but highly respectable parentage in the town of Rowe, Mass , July 25, 1819, and died at Leverett, Mass , of dropsy of the heart, August 29, 1878 His boyhood was spent at his native place He was always hard working, boy as well as man He taught school one or two terms in Rome When about eighteen he left his home and went to Berkshire Medical College, Pittsfield, Mass , where he graduated with high honors in 1842 Thence he went to Leverett and entered into partnership with the late Butler Wilmarth, M D , who was a victim of the terrible Norwalk disaster in 1853 Dr Wilmarth and Dr Rice were like brothers all their lives, and were in partnership for many years, when finally Dr Wilmarth became a homœopathist and settled in Hopedale, and Dr Rice remained in L , where he practiced medicine for forty years He stood foremost in his profession, and was beloved by all his medical brethren, who looked upon him as a physician of sound judgment and high integrity

He was, very early in his professional life, a member of the Massachusetts Medical Society He wrote many articles for the medical journals, one of which was copied into the London *Lancet*, referring to an instrument of his own invention, for extracting fish bones from the throat

In July, 1844, he married Miss Harriet Clapp, of Chesterfield, who was a graduate of Mt Holyoke Seminary in 1842 Mrs Rice was a lady of high culture and proved herself a loving helpmate for forty years of wedded life In the latter years of her life she was associated with her husband in the practice of medicine, and had a most successful practice before and after his death, until her decease in 1885

Dr Rice was an associate member with Butler and Sumner in the House of Representatives in 1853, both were very warm friends of his, as after years proved by the many mementoes sent him by them He became a member of the American Medical Association in 1865

The Doctor was a loving husband and tender father, as well as a kind and charitable neighbor and citizen, and honest in all his dealings Always a sunbeam in the sick room, and when his tired spirit took flight to the mansions of rest, it was on every one's lips, "*How can we* spare him?" He was always untiring in his efforts to save life He was a Christian man and a very prominent member of the Congregational church for many long years, always ready to do his part, and for many years a member of the choir He was influential as well as public spirited, and was for many years chairman of the school committee He was buried with Masonic ceremonies, being a member of that order J F W

JEFFERSON PRATT, M D

Jefferson Pratt, M D , of Hopkinton Mass , was born in Belchertown, Mass , June 6, 1803, the youngest of a family of sixteen children His father was a captain in the Revolutionary Army He was a graduate of Berkshire Medical College, Mass , and commenced the practice of medicine and surgery in Hopkinton in 1827 In 1829 he married Miss Harriet Valentine Harrington, of Hopkinton, who with two daughters survive him He was a member of the Massachusetts Medical and other societies, was a man of strong individuality, and comprehensive in his diagnosis and treatment of disease He was a member of the American Medical Association from 1856, and attended meetings in 1858, 1864, 1865, 1868 and 1870

After a successful practice of more than fifty years, he died suddenly at the residence of his daughter, Mrs J C Whitin, of Hopkinton, in 1883, having just returned from a family picnic

M C P

BOOK REVIEWS

THE PRINCIPLES OF ANTISEPTIC METHODS APPLIED TO OBSTETRIC PRACTICE By DR PAUL BAR, Accoucheur to, formerly Interne in, the Maternity Hospital, Paris, etc Translated by HENRY D FRY, M D , 8vo, pp vii–175 Philadelphia P Blakiston, Son & Co 1887 Chicago W T Keener

Those who have some doubts as to the value of antisepsis in obstetrics should read Dr Bar's book and have them removed Those who have no faith at all in antiseptic obstetrics should read it, if they are still open to conviction, for the purpose of seeing if they may not be mistaken in their views Those who thoroughly believe in practicing obstetrics on antiseptic principles should read the book in order to be doubly assured that they are right in their practice For while the reader will soon discover that the author is an enthusiastic believer in the use of antiseptics in obstetrics, he will see at the same time that Dr Bar is a conservative enthusiast, he never lets his enthusiasm carry him beyond the point of being guided by precise indications alone in his practice and teachings Nor will any one wonder at his enthusiasm after reading the third chapter, on "Influence of Antiseptics on Puerperal Epidemics"

Probably most physicians in this country have become somewhat familiar with the subjects of the greater number of chapters in Dr Bar's book But nevertheless, the author presents his material in a pleasing manner, and often in a new light, and no one, after reading the book, can claim that it is dull

or that he has wasted his time The first chapter on the "Relation of the Germ Theory to the Puerperium," and a part of the second chapter, on "The Antiseptic Method and Agents," are the key to the whole subject, and we think that some readers, at least, will find in them much that they have given no attention to before

Considering its small size the book contains a very great deal The subjects of the first three chapters have been mentioned The other chapters deal with Disinfection as an Antiseptic Measure, Hygiene of the Puerperium, Antisepsis during Labor, Antisepsis during the Third Stage of Labor, Antisepsis during the Puerperium, Antisepsis in Catheterization, The Antiseptic Method in Rupture of the Uterus, The Antiseptic Method in the Cæsarean Operation, and an appendix on "Antisepsis to the Umbilicus," and "Ophthalmia Neonatorum" Every physician who does obstetric work should study this book

PULMONARY CONSUMPTION Its Etiology, Pathology and Treatment, with an Analysis of 1000 Cases to Exemplify its Duration and Modes of Arrest By C J B WILLIAMS, M D, LL D, F R S, etc, and CHAS F WILLIAMS, M A, M D, etc Second Edition, enlarged and rewritten by Dr C F Williams 8vo, pp 446 With four colored plates and ten wood cuts Philadelphia P Blakiston, Son & Co, 1887 Chicago W T Keener

The first edition has made this work known to the profession We can not here describe it with the detail that it deserves The chapters on pathology are interesting and accurate These are well illustrated The colored cuts are admirable, showing the appearance and distribution of tubercle bacilli—the tissues In connection with the characteristic lesion of tubercular phthisis are described the various secondary changes brought about in the lungs and thorax generally, such as displacement of organs, modification of the shape of the chest, etc The chapter devoted to the "Predisposing Causes of Consumption" is also most interesting and instructive The subject of treatment is considered in chapters, with the following headings "Prophylactic and Anti-Phthisical," "Climatic Treatment of Consumption," "Antipyrexial," "Palliative Treatment of Consumption," and "Antiseptic or Bacillicide Treatment" The last chapter, while it covers completely the ground of antiseptic treatment of phthisis, does not furnish us much hope of successfully combatting the disease in this way Without doubt the prophylactic treatment remains the most important

MISCELLANEOUS.

HEALTH IN MICHIGAN —For the month of October, 1887, compared with the preceding months, the reports indicate that bronchitis, pneumonia, remittent fever, scarlet fever, diphtheria, and tonsilitis increased, and that diarrhœa, dysentery, cholera morbus, cholera infantum, and typhoid fever decreased in prevalence Compared with the preceding month, the temperature in the month of October, 1887, was considerably lower, the absolute humidity was much less, the relative humidity was less, the day and the night ozone were more Compared with the average for the month of October in the nine years, 1879-1887, intermittent fever, consumption of lungs, diphtheria and diarrhœa were less prevalent in October, 1887

For the month of October, 1887, compared with the average of corresponding months for the nine years, 1879-1887, the temperature was considerably lower, the absolute humidity was less, the relative humidity was the same, the day ozone was slightly more, the night ozone was less Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of October, 1887, at fifty eight places, scarlet fever at thirty six places, typhoid fever at forty five places, measles at twelve places, and small pox at one place. Reports from all sources show diphtheria reported at seven places more, scarlet fever at five places more, typhoid fever at one place less, measles at seven places more, and small pox at the same number of places in the month of October, 1886, as in the preceding month.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM OCTOBER 29, 1887, TO NOVEMBER 4 1887

Capt Paul R Brown, Asst Surgeon, leave of absence extended one month S O 250, A G O, October 27, 1887

Capt Chas B Byrne, Asst Surgeon, ordered for temporary duty at Ft McHenry, Md S O 231, Div Atlantic, October 28, 1887

Capt Curtis E Munn, Asst Surgeon, relieved from duty at Ft Canby, Wash Ter, and ordered for duty as Post Surgeon at Ft Klamath, Oregon S O 251, A G O, October 28, 1887

Capt G W Adair, Asst Surgeon, the leave of absence for seven days granted on the 27th inst by the commanding officer, Ft Brady, Mich, is extended twenty three days. S O 231, Div Atlantic, October 28, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING NOVEMBER 5 1887

Surgeon P Fitzsimmons, ordered to the U S S "Marion."

Asst Surgeon L W Atlee, ordered to the U S S "Marion"

Medical Inspector N L Bates, ordered to the U S S "Trenton"

P A Surgeon Henry G Beyer, ordered to the U S S "Trenton"

Asst Surgeon Stephen S White, ordered to the U S S "Trenton"

P A Surgeon P M Rixey, detached from the U S S "Trenton" and wait orders

P A Surgeon Richard Ashbridge, ordered to the U S S receiving ship "St Louis"

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE WEEK ENDING NOVEMBER 5, 1887

Surgeon C S D Hessenden, detailed as chairman of Board for the physical examination of officers of the Revenue Marine Service November 1, 1887

P A Surgeon F W Mead, detailed as recorder of Board for the physical examination of officers of the Revenue Marine Service November 1, 1887

P A Surgeon A D Bevan, relieved from duty at Portland, Oregon, ordered to Marine Hospital, New York November 2, 1887

P A Surgeon P M Carrington relieved from duty on Revenue Str "Rush," ordered to Marine Hospital, San Francisco, Cal November 2, 1887

Asst Surgeon T B Perry, relieved from duty at Marine Hospital, San Francisco, Cal, ordered to assume charge of Service at Portland, Oregon November 2, 1887

Asst Surgeon H T Goodwin, relieved from duty at Norfolk, Va, ordered to Marine Hospital, New Orleans, La November 5, 1887

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ORIGINAL ARTICLES.

PATHOLOGICAL HEREDITY AND CONGENITAL ABNORMALITIES OF THE TEETH

Read before Section on Dental and Oral Surgery, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY ALTON H THOMPSON, D D S,

OF TOPEKA KANSAS

Heredity is that force by which every organism, plant or animal is formed in the likeness of, and is the counterpart, more or less exact, of the parent forms which produced it Its external form and features, its internal organs and tissues, are copied after the type of the species to which the organs belong, and all its distinguishing peculiarities are characteristic of that species There is a law of type which governs the evolution of every molecule, the placing of that molecule in the building of tissues, the arrangement of those tissues in the growth and position of organs in the construction of the individual, so that it shall be a typical, representative organism That law is heredity

It is not in the field of the normal physiological operations of this law, that we wish to study it at this time, but rather to inquire briefly into its workings when influenced by abnormal conditions, its pathology, and that as especially manifested by abnormal development of the teeth and their environments There has long been a conviction in the minds of the scientific men of the profession, that causes of defective tissual formation of the teeth must be sought for farther back than the life history of the individual, and that in the pre natal influences governing tissual character and quality, will yet be discovered many of the forces dictating those variations from normality in dental evolution which are so interesting, but too often most disastrous in their effects upon the arrangement and quality of the teeth

Like all other organs and tissues, the development of the physical peculiarities of the teeth is under the control of omnipresent hereditary influences, immediate and remote In no class of organs is the effect of inheritance by variation due to changed conditions so marked as in the teeth of man For instance, being peculiarly susceptible to the effects of use and disuse, they have, by the protracted influence of disease weighing upon and retarding their proper development for generations, become so defective and incomplete as to approach the condition of rudimentary organs in man, to a considerable degree The third molar or wisdom tooth, especially, is altogether rudimentary and is hastening towards extinction It is always defective, owing to deficient structural integrity, is often a dwarfed rudiment in size, and is frequently absent altogether, from mere failure to erupt, or perhaps to develop at all in the jaw

In man, transmitted variations are now under the domination of that artificial life with which he has surrounded himself He is far removed from a state of nature in the environments of civilization, and as a result the variations at present in progress in the species are rather detrimental than beneficial to his physical perfection and normal integrity of structure This is especially noticeable in the tendency to transmit imperfections and disease, so conspicuously manifested in civilized man to day And through the laws of and the persistence of disease and defectiveness, the teeth are the unfortunate recipients of a legacy of imperfections in varied forms In many other tissues and organs there is a tendency to spontaneous cure by gradual elimination during transmission, but with the teeth the opposite rule obtains, for diseases of these organs seem to be augmented by transmission Diseased malformations and defectiveness are rarely eliminated, even by the curative influence of a favorable crossing One reason for this perpetuation of disease seems to be that, owing to the depressing effects of disease, the force of heredity is directed towards the suppression of the teeth in accordance with the law of economy of growth, and the supplemental assistance of disease is allowed in the work of destruction Not only is the type of a tooth usually determined by the impress of one or another of the parents, but the particular defects and deformities are the result of parental impression or of unfortunate temperamental or consanguineous combinations Immediate effects are not always of most importance, although these are often paramount to the impressions of more remote inheritance Special defects are usually traceable to recently inherited imperfections, for, as Carpenter says, "the influence of parents on the constitution of offspring is strikingly manifested not merely in the mixture of their normal characters, but also in the tendency to hereditary transmission of perverted modes of functional activity which have been habitual in either parent Many diseases are accounted as hereditary, and perhaps others might be added to the list The predisposition may have been congenital on the part of the

parents or may have been acquired by themselves

The intensification that almost any kind of perversion of nutrition derives from being common to both parents, is most markedly evinced by the lamentable results which too frequently accrue from the marriage of individuals nearly related to each other and partaking of the same 'taint'" Or, aside from taint, even strong idiosyncrasy is frequently present which, by being intensified, may give rise to unfortunate physical or mental defects As evidence of the correctness of these observations on varied inheritance, we have the effects of syphilis, gout, phthisis, insanity, alcoholism, etc Regarding the effects of hereditary and transmitted disease upon the teeth, Dr Norman W Kingsley is an authority, and he says "Many of the common forms of irregularity are directly traceable to inheritance and are transmitted peculiarities Especially when it is confined to one or two teeth, the primary cause, so far as that individual is concerned, is an hereditary family peculiarity The teeth of every person possess more or less individuality, and most of the peculiarities which stamp them are inherited The form and color of the teeth, when not disturbed by abnormal influences, are derived from the same source Any departure from typal form is a peculiarity of descent as well as predisposition to defect or deformity It is a most wonderful subject for contemplation that, at some remote period in the history of our progenitors, nature departed from the normal type and produced a dwarfed lateral incisor or a twisted canine, or suppressed a bicuspid or a wisdom tooth, and following down the line of descent we find precisely the same peculiarity appearing and reappearing, perhaps not in the same line, but in the same family" As corroborating these observations, we notice that children frequently have the same defects upon the same teeth that the parents had, and that they become carious and are lost at the same age, or, owing to the increased ratio of defectiveness by inheritance so apparent in the teeth, are lost earlier in the child A mild defect of shape or contour, an extra cusp, a lingual fold upon the anterior teeth, total suppression of a tooth (as of a lateral incisor), the occurrence of caries in the same location, dark and imperfectly calcified spots similarly located in parent and child—all these and other defects and abnormalities of the teeth are often traced through families

The workings of the law of atavism often produce good results by causing the reappearance of a good denture in a family in which the teeth have long been imperfect and defective, with a prospect of its transmission and the elevation of the family type But, on the other hand, atavism also allows of the reappearance of a denture comparatively bad in a family which has good teeth, and with the danger of perpetuation Sometimes there is a blending of the types of two or more ancestors in the same individual—the front teeth representing a good organization of one parent and the back teeth the strumous, phthisical, etc , of the other, or *vice versa* These combinations vary infinitely and are apparently due to conflict of tendencies and the compromise of opposing elements Sexual limitations are also met with in all forms of hereditary diseases, and are more strongly pronounced in those diseases affecting hereditarily the skin and its appendages Thus abnormal deficiency or excess of the hair is apt to be accompanied by deficiency of the teeth and to follow in one sex. Peculiar malformations, malpositions and absence of the teeth often occur in the male line—perhaps more often than in the female Sometimes hereditary caries is limited to one sex in a very decided manner But in immediate descent the inheritance of form, color, quality and defectiveness of the teeth, is far more likely to be in reverse order as to the sexes

The son most frequently inherits the dental, as well as the other physical peculiarities of the mother, or failing here, through avatism he receives those of her father or of *his* mother The daughter, on the other hand, presents most frequently the characteristics of her father or of his maternal ancestors This is the law of reversal by sexes, and is largely prevalent in all transmissible peculiarities, abnormal as well as normal It is often observed in the transmission of disease from mother to son, or from father to daughter, the child of the same sex as the diseased parent escaping infection

Pathological heredity in relation to the teeth refers to disturbances of function which eventuate in defective dental development from causes received from parental impress The study of the pathology of dental embryology is now largely concerned with the investigation of the effects of transmissible diseases which directly affect the growing tooth germs, and their deleterious influence is now a well recognized fact Some observers claim that defective enamel is caused by acid fluids acting upon it during eruption, but the evidence is yet upon the side of the congenital and follicular effects of disease As Magitot says, "if the alteration were chemical in its nature, there would be no change in the centre of the organ, but this is always present Congenital lesions of the teeth, fissures, erosions, etc , are exclusively due to disturbances of dentinification and belong to the history of the follicular evolution"

When we contemplate the whole field of pathological heredity, of disease and predisposition to disease transmitted, of all kinds of debility and enervation so prevalent and transmissible, we cannot wonder that the teeth are so often defective, but rather that they are ever normal in any respect Most diseases affect the tooth germs, or other tissues and organs, in a particular way, so that peculiar markings are produced which are more or less characteristic and pathognomonic Some of these markings, as those of syphilis notably, have a positive diagnostic value to the pathologist Hereditary diseases inducing functional perversion cause abnormal constitutional conditions called *diathesis* or *cachexia*, and which are graded in intensity from a mere "taint" down to a state which is positively pathological and diseased

Persons inheriting constitutional taint, vitiated by diseased nutrition, have the entire system impressed in formation and saturated in life, by the toxical element of the disease This element degrades and deforms the development of tissues and organs, per

verts the physiological activities during life, and depresses the creative powers The fœtus which inherits such an influence is under the domination of a vicious power which retards perfect evolution, and with a special tendency oft times to the injury of special tissues or special classes of organs and tissues The developing teeth being so sensitive to all kinds of disturbing influences—for hereditary diseases affect primarily the skin and its appendages and related tissues—are most readily affected by the controlling vice Markings are often left as a permanent legacy of the disease which, as in the case of syphilis and gout at least, are of pathognomonic value Other diseases, as phthisis, scrofula, struma, etc, leave markings which have a less positive value, for their features are not yet certainly identified, and there are many others which may affect the teeth during development, of which we know little, but suspect much

The "Prince of Diseases," syphilis, holds a first place as a prime cause of disturbances of dental evolution The destructive and lasting impressions it leaves upon the teeth in embryo are unparalleled in pathological history, for when it affects the tooth germs severely, it produces teeth of hopeless deformity Much discussion has been indulged in by authorities as to its various signs, which are too familiar to be recapitulated here We need only call attention to the fearful effects of this great lesion as illustrating the disturbing influence of hereditary disease Gout, scrofula, struma, phthisis, etc, also produce teeth more or less characteristic as furnishing evidence of this power When these and kindred diseases and their resultant cachexia are thoroughly investigated, perhaps positive signs can be tabulated as accompanying each of them, but our knowledge is yet insufficient Suffice it that they do disturb formation and produce defective teeth, as do also many of the acute maladies of infancy

An interesting branch of this subject is the study of the effects of *racial* crossing, miscegenation, upon the arrangement and structure of the teeth We know that persistence of the peculiarities of race is one of the wonders of heredity, and that by its powers the permanence of racial characteristics is rendered possible Races of men exist to day whose ethnic features have remained unchanged through centuries, and will remain, because comparative purity of race has been maintained If racial persistence is so strong, it is not strange that mixture of races, and the conflict of various and often conflicting and heterogeneous qualities and incompatible tendencies of structure, should eventuate in imperfect, malformed and deteriorated organization We find this to be the case as regards the teeth in the unfortunate combination of large teeth with small jaws, first described by Dr J H McQuillen, and that this is a prime cause of irregularities of various kinds

Dr Kingslev, in describing this familiar fact, says that "aside from disease and imperfect development, most of the abnormalities of arrangement we see are to be charged to the crossing of races, especially as found in America among our Anglo Saxon population The persistence of race, the reappearance of external racial qualities erratically in all possible and unfortunate combinations, all contribute towards the degradation of the teeth and their environments" Mixing races always produces a deterioration of physical perfection, as a first result of crossing, and this, of course, is a prime cause of degeneracy of dental structure as well M Magitot has dwelt at length on this subject in his studies of dental caries He says that "in certain families and races caries is a frequent and habitual malady, through the transmission of certain anatomic predispositions of structure Thus certain predispositions of dentition, as anomalies of structure, reproduce themselves through successive generations" He found that among the mixed races in France there was more disposition to caries than among the comparatively pure races From the records of the War Department he constructed a map showing the geographic distribution of caries in France, which bore an exact relation to the ethnography of the nation, *i e*, the districts of the least prevalence of caries had pure races, and those having the most caries were in the belt of foreign invasions and consequent mixture of stocks

After the first effect of crossing, *i e*, physical degeneracy and depressed vitality, the most important result is the confusion of typal characteristics as a cause of deformity and deterioration, consequent upon the unsuccessful efforts of nature to harmonize discordant and conflicting typal elements It is a rule that inharmony of racial characteristics is an active cause of abnormalities of all kinds, and it follows that if pure races have the best physical development, they must have the best teeth, and which we find to be the case as a rule But the subject is too vast to venture more than these mere suggestions We are but upon the threshold of the subject of heredity, and especially in regard to the influence of hereditary causes as inducing imperfect dental development As Mr Chas S Tomes has recently said, "an enticing field of inquiry lies in the question of how far heredity plays a part in the genesis of dental irregularities and of dental caries As vast a number seems quite as likely to be under the sway of distinct heredity, as is the conformation of the nose or the lips Many families have peculiarities—a V shaped palate, marked charcteristics and abnormalities of the teeth, etc, running through all the members Close observation of the mouths of the children of large families in conjunction with the parents, might throw some light on the vastly wider question of heredity

"The question of how far the child is demonstrably a mere product, showing not only the peculiarities of the parents, but bringing to light again tendencies inherited from more remote ancestors, is one of the greatest interest, for in every individual many strains of blood unite and may be expected to exert themselves, to varying extents"

As Darwin has said, "the whole subject of inheritance is most wonderful," and we may add that the wonders it presents in normal action are only surpassed by the manifestations of its power in pathological condition, for the transmission of disease is more incomprehensible than the transmission of normal structure and qualities

CONGENITAL PHIMOSIS

Read in the Section on Diseases of Children, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887

BY WILLIAM S STEWART, A M, M D,

PROFESSOR OF OBSTETRICS AND CLINICAL GYNÆCOLOGY IN THE MEDICO CHIRURGICAL COLLEGE, OF PHILADELPHIA, PA

The condition known as congenital phimosis, a contraction of the prepuce over the glans penis attended by inability of retraction, has of late called the attention of the profession to the fact of its very frequent occurrence, and being a source of discomfort and suffering and evil to the young victim

The distress resulting from such condition continues until the force of erection of the organ involved overcomes the unnatural resistance

The evidence of this is exhibited in the fact that most male children during their infancy are more irritable in disposition, nervous in temperament, and difficult of management than females during the same period

In general, when there is a disturbance of any part of the body the child's hand is instinctively applied to that part, so great is the distress in this condition that he early begins to manipulate his penis, applying his hand to the organ in your presence, and for this offense his mother will perhaps rebuke or chastise him as she has frequently done, without for one moment considering that it is the natural result of a morbid condition and not due to a depraved disposition

On investigating the condition of one of these little sufferers we find a muzzled glans, the preputial mucous membrane adhering to its entire surface with here and there embedded between them small, hard and irritating substances of a cheesy consistence, while back of the corona there is a larger accumulation

On attempting to retract the prepuce as far as possible, its opening is found contracted to about the size of a pin's head

This condition is so aggravating as to result in a desire upon the child's part to urinate frequently, and causes the napkin to be constantly wet, while the penis and surrounding parts are irritated and inflamed

Examining the organ more thoroughly you will invariably find that the meatus is red and inflamed as a result of the condition referred to, there is also a scalding on urinating and the little victim will invariably cry out in the agony of the act, which will by and by attract the attention of the nurse, who, in her ignorance of the functions of the various parts of the body, will infer that the child's kidneys are affected This fact being reported to the physician he, in his thoughtlessness, would most likely attribute it to acidity and treat it accordingly giving only temporary relief

It is not, however, the difficulty of micturition or the accompanying pain which is to be considered, but the effect upon the general system of the pent up penis struggling for liberty, erecting and re erecting until it finally succeeds in overcoming the difficulty, or, until the habit of self abuse with all its debasing and debilitating effects is brought on

No doubt if careful observation were made many other serious attacks might be traced through reflex influence to this congenital condition

Convulsions, which are so likely to occur during the early months of childhood, and are wholly attributed to the effects of teething, indigestion and intestinal worms, will prove by closer observation to be due, at least at times, to the excessive irritation resulting from phimosis

Paralysis of infancy, has by still further investigation been traced to the same cause, and such has been the experience of the orthopœdic surgeon that when from almost any cause a child is brought under his care for nervous affections of any part of the body, the little fellow is examined as to the condition of the foreskin, and if it be not satisfactorily relaxed the first step in his treatment is circumcision

I recall a most interesting case in which a child had been in convulsions for several days and under treatment by a reputable physician, who, with his bromides and chloral, was unable to afford permanent relief When called to see him I found one side of his body paralyzed, and his power of speech gone, and still everything in the way of remedies had been assidiously given

On inquiring into the history of the little fellow's treatment what surprised me most was that, on removing the napkin the mother did not direct the attention of the careless doctor to the condition of the child's penis as it was swollen and inflamed and on the slightest pressure there exuded a quantity of disintegrated smegma The relief obtained by treatment of the organ gave most satisfactory evidence as to the influence of the occult cause in producing persistent convulsions

Although an apparent paralysis had been established and the spasms were still uncontrolled, after operating upon the child and administering the iodide and bromide of potash internally the little fellow made a rapid recovery, the paralysis disappeared, his speech returned, and he did not have another convulsion from the time of the operation

Now, as to the method of operating Circumcision as a religious rite has been practiced by the Jews since the days of Abraham Why it should have been imposed upon that nationality as a religious ceremony was probably the fact of the necessity But as such a rite was not enjoined for the Christian dispensation we are not obliged to follow any prescribed Mosaic or Christian law, but be a law unto ourselves

It is the method of operating that interests me most in appearing before you at this time, the idea of using the knife in removing any part of the body is still so repulsive to our fellow *gentile* race and particularly repugnant to parents, and especially mothers, that in order to meet this prejudice, I have been led to devise the following plan of treatment, and that you may better understand the philosophy of my method, let me first explain to you the condition of the parts

The trouble involved is due to a contraction of the mucous membrane of the prepuce, the skin being lax

and sufficiently free On careful examination you will find the mucous membrane adhering closely to the entire surface of the glans penis When circumcision is performed the cutting off of the redundant foreskin does not remedy this trouble referred to, nor can the prepuce be retracted without first tearing or splitting up the mucous membrane

What is sought after for the health and comfort of the boy is easy retraction of the prepuce so that cleanliness of the organ can be secured, and all irritating matter that has accumulated around the corona may be removed

This I have found by experiment can readily be accomplished almost invariably as a bloodless operation, by a careful stretching of the mucous membrane with an instrument that I have devised for the purpose, which with its four expanding blades stretches the parts equally and at the same time gradually breaking up the adhesions until we uncover the anterior portion of the glans, when we are obliged to resort to the blunt end of a probe to dissect off from the glans as far back as the corona the tightly adherent membrane

On so doing we will come across here and there over the glans small particles of hard granular substances about the size of a pin's head which have become embedded between the mucous membrane and the glans, acting as foreign bodies, and of course a source of great discomfort When the corona is reached we generally find a layer of smegma filling the entire indenture of this part of the organ This carefully removed, the parts oiled with some wholesome unguent, and the foreskin drawn forward the operation is complete, without a drop or at the most with only a few drops of blood, and without the necessity of a stitch or the application of any special dressing

I will endeavor to give you an ocular demonstration of my method of procedure in this operation First, as the operation is only momentary I will not require to subject the child to the risk of an anæsthetic But as a substitute I sometimes use a 10 per cent solution of cocaine, applying it over the mouth of the prepuce, which results in a painless operation After the cocaine has taken effect having placed the boy on his back on a table, we will take our position on the right side of the boy and table and with left thumb and forefinger we will grasp the side of the prepuce whilst we take the instrument in the right hand The assistant will stand on the opposite side of the table, and will also grasp the opposite side of the prepuce and stretch it upwards and apart as much as possible to enable the instrument to be inserted into the opening Having passed the instrument as far as possible into the orifice of the prepuce we must be careful to avoid the meatus as the urethra might be lacerated by mistake In expanding the blades of the instrument, which I have named the 'Preputial Dilator," much care must be exercised in order that the prepuce is not too suddenly and extensively stretched, so as to avoid tearing either mucous membrane or skin, for if such should happen the success of the operation is not nearly so satisfactory It would be much better to repeat the process cautiously from time to time until thoroughly accomplished, than to be rash at the first, as it is very evident that during the healing process the tendency of the parts is to contract and therefore reestablish the original trouble

1801 Arch Street

EFFECTS OF OBLIQUITY OF THE CORRECTING LENS TO THE VISUAL AXIS

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY EDWARD JACKSON, A M, M D,

ADJUNCT PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLICLINIC

The effect of a spherical lens upon a pencil of light rays entering it obliquely has been carefully studied by Prof E C Pickering and Dr Charles H Williams, who have recorded the results of their investigations in the *Proceedings of the American Academy of Arts and Sciences*, Vol 10, 1874-5, p 300 Dr G Hay, in a paper "On the Increase of Refractive Power of a Plano Cylindrical Lens when Rotated about its Axis," in the *Transactions of the American Ophthalmological Society* for 1875, p 319, has given the results of a similar study with reference to cylindrical lenses

In these papers the mathematical questions arising in connection with this subject are clearly and exhaustively discussed But the only practical applications made of the law developed, is, in the former paper, a reference to its importance in the correcting of wide angle photographic lenses, and in the latter, the suggestion of an apparatus for the measurement of astigmatism A recent paper on the subject in the *American Journal of Ophthalmology*, by Dr S M Burnett, equally neglects the extremely important practical aspect of the subject

Briefly, the placing of a lens so that the incident pencil of rays enters it obliquely increases its refractive power The cylindrical lens acts simply as a stronger cylindrical lens, but with the spherical lens the increase of refractive power is greatest in the meridian in which the obliquity is measured, so that it comes to act as a sphero cylindrical lens, with one principal meridian in the direction of the obliquity, and the other perpendicular to it Thus, if a convex lens is revolved about a vertical axis so that a pencil of horizontal rays strikes it obliquely, its effect upon the pencil will be that of a stronger convex spherical lens combined with a convex cylindrical lens with its axis vertical

Tables showing the effect of given degrees of obliquity are given by Pickering and Williams I have

confirmed the approximate accuracy of these tables both by calculation and empirical tests They are sufficiently accurate for all practical purposes, with glass having a refractive index 1 54, which is about that of the glass used for spectacle lenses

The following table, based upon the data of Pickering, and Williams, and Hay, gives in the first column the various degrees of obliquity up to 40° In the second is shown the effect on a 1 Diopter cylindrical lens, while the third gives the sphero cylindrical effect of a 1 Diopter spherical lens equally inclined to the axis of the incident pencil

Obliquity of the Lens	Refractive Power of a 1 D Cylindrical Lens so Placed	Sphero Cylindrical Equivalent of a 1 D Spherical Lens so Placed
0°	1 D cyl	1 D spherical
5°	1 01 "	1 00 sph ◯ 0 01 cyl
10°	1 04 "	1 01 sph ◯◯ 0 03 cyl
15°	1 10 "	1 02 sph ◯◯◯ 0 08 cyl
20°	1 17 "	1 04 sph ◯◯◯◯ 0 13 cyl
25°	1 30 "	1 06 sph ◯◯◯◯◯ 0 24 cyl
30°	1 44 "	1 09 sph ◯◯◯◯◯◯ 0 36 cyl
35°	1 69 "	1 12 sph ◯◯◯◯◯◯◯ 0 56 cyl
40°	2 01 "	1 16 sph ◯◯◯◯◯◯◯◯ 0 83 cyl
45°	2 46 "	1 22 sph ◯ 1 24 cyl

It may be noted with reference to this table that the cylindrical effect increases more than the spherical, and that both increase more rapidly the higher the degree of obliquity

For instance, a 10 D spherical lens with an obliquity of 10° shows an accession of spherical refraction of only one tenth of 1 D , and of less than one-third D of cylindrical effect But making the angle three times as great, 30°, the spherical is increased almost 1 D , and the cylindrical amounts to more than three and a half D

Dr Thomas Young proposed to correct his own compound myopic astigmatism by the proper spherical lens placed obliquely before his eye Evidently such an arrangement is only possible when the spherical lens employed is considerably stronger than the cylindrical effect required It has, however, been resorted to from time to time by those using strong convex or concave spherical lenses The device being generally accidentally discovered by the wearer of the glasses, who finds that by holding the object in a certain position, that is, so that his visual axis and the pencil of incident rays shall strike his glass with a certain degree of obliquity, that he can see it more distinctly than anywhere else

Within a month I was consulted by an old gentleman whose left eye was useless, with a pterygium extending on to the inner portion of the cornea of the right He read with a convex 5 D spherical, holding the page very close to his face, and so far to the left that he could barely see it above the bridge of his nose In this way he was able to very nearly correct the 3 50 D of hyperopic astigmatism, axis vertical, which I found on examination This method of correcting astigmatism is, however, quite inferior to the use of the sphero cylindrical lens Because, unless the amount of astigmatism is so slight as to make its correction very unimportant, the glass must be so much inclined that a very slight difference in the inclination will greatly vary the cylindrical effect, making it necessary to always bring the object to a certain position in order to see it clearly, and thus greatly narrowing the available field of vision Suppose a patient had a compound myopic astigmatism requiring for its correction a — 3 s ◯ — 1 cyl axis 180° With such a lens the patient could turn his visual axis 15° from the perpendicular to the lens, either to the left or right, or up or down, giving a field of vision of 30° in any meridian without seriously changing the refractive effect of his glass But if, as myopes not rarely do, he obtained his cylindrical effect by canting the lenses forward, he would have to make their obliquity to the visual axis equal 30°, in which case a deviation of the axis 5° either upward or downward will very greatly impair the accuracy of his correction

When we find a patient who can see better by looking through his glasses obliquely, we should never rest with that correction, but by the aid of the table given above, and careful testing, should search out the sphero-cylindrical equivalent of the obliquely placed lens, and give the patient the benefit of the larger, accurately corrected, visual field, and the lesser liability to transgress its limits

Among systematic writers I believe Landolt alone has directed attention to the importance of care as to details in the mounting of lenses before the eye, and he has by no means exhausted the subject, especially in this direction The greater care to avoid undesired cylindrical effects is of course needed with the stronger lenses For distant vision the lens is to be mounted with its surfaces nearly coincident with the plane of the face, making due allowance for any peculiar habit of position, while for near work, done at a lower level than the eyes, the front surface should look downward and forward

Where a single lens is used for both near and distant vision, its position must lie midway between what would be the best positions for either near or distant visions alone Here the advantages of strongly periscopic lenses would be manifest The perfect periscopic lens, in this respect, would be one having the centres of curvature for both its anterior and posterior surfaces as close as might be to the centre of rotation of the eye Sometimes where the one lens must be habitually used with the visual axis in widely varying positions, it may be worth while even where there is no astigmatism, to add a weak cylinder, with its axis corresponding to the plane in which the visual axis moves, in order to correct the cylindrical effect that will be caused at right angles to this When bifocal or divided lenses are employed their position should also be between the proper positions for near and distant vision But instead of midway between should be much nearer the proper position for the stronger glass Thus with convex bifocals the glass for near work being the stronger, they should look more downward, with concaves the distance glass being the stronger they should look more forward Better still, as has some-

times been done, they may be mounted in a frame which has an angle where the two parts come together, so that each may be given just its proper direction

But perhaps the most important practical lesson to be learned, from a study of the effects of obliquity of the correcting lens, is an illustration of the necessity for accuracy in the determination and correction of ametropia particularly of myopia To place before an eye a lens that does not accurately meet its needs, may by inducing the patient to look obliquely through it, and so to encounter the cylindrical effect, prove quite disastrous for the patient

Chas J, æt 21, came to me recently with evidences of eye strain, headache, pain in the eyes, choroidal congestion and commencing conus He was wearing right and left —4 D spherical that I had ordered for him four years ago and which had been worn most of that time with comfort But he now believed he had some astigmatism, saw with different degrees of distinctness, lines running in different directions *To see clearly objects a little way from him, he would twist his head to one side and look obliquely through his glasses* This maneuver gave him V $= \frac{15}{\infty V}$ mostly, while looking directly forward he saw but $\frac{15}{\infty}$ partly Under a mydriatic his symptoms of eye strain promptly disappeared, it was found that during the four years his myopia had increased 0 75 D in each eye Such an increase may have been due to a strictly physiological development of the globe, but the effort to see clearly with his imperfect correction caused all the symptoms of an aggravated astigmatism The obliquely placed lens caused an astigmatism of the incident pencil which varied continually and allowed the establishment of no constant compensatory accommodative effort

I fear that many ophthalmologists regard it as a small matter to leave a little myopia uncorrected, or think it rather a good thing to do, because it saves a little effort of accommodation I believe that for reasons above indicated it is dangerous, and could detain you longer with the citation of cases that would illustrate and enforce my point As spectacle lenses are usually fitted and mounted, it is quite possible to get by looking through the edge of the lens an obliquity of the incident pencil either upward or downward of 25° or 30°, and to the right or left of from 30° to 40° Now a glance at the table will indicate how much increase of spherical refraction accompanied by astigmatism can be obtained, by such an obliquity, with a strong lens And if, as many, especially Thomson and Green, have argued, astigmatism be especially dangerous to the myope, it cannot be doubted but that the temptation to thus secure better distant vision is also very dangerous

The myope with a partial correction shares this danger, with the presbyope whose glass is insufficient for near work and who strives to shorten its focus by looking through it obliquely, and the two constitute the best and most common examples of the dangers of using lenses not wisely selected

Another very practical application of our knowledge in this direction, is in warning patients, especially such as use strong lenses, always to look through the center of the glass And in this law governing the action of lenses we may find a partial explanation of that difficulty which Landolt so graphically portrays, in satisfying our cataract patients with the optical substitute for the crystalline lens

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PATHOLOGICAL CONDITIONS OF THE TEETH AND THEIR SYSTEMIC EFFECTS

Read before the Section of Dental and Oral Surgery, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY K B DAVIS, M D,
OF SPRINGFIELD ILL.

This subject is one of great importance, not only to the dentist but to the oculist and the general practitioner of medicine Important as it is, however, it has not heretofore received that attention from medical writers, and practitioners that it justly merits That pathological conditions of the teeth and the structures adjacent to them in the oral cavity, do exert a most pernicious influence upon the general system, is a fact as well established as any other medical observation Yet I fear there are too many practitioners that almost wholly ignore these conditions as causes of many systemic disturbances

The attention of the profession was recently called to this subject, by the New York *Medical Record*, in which Dr Samuel Sexton, a distinguished oculist and aurist of New York City, and the editor of the *Record*, were the principal writers

The *Medical Record* of October 4, 1884, contains a report from the aural service of Dr Sexton, entitled "Pain in the Ears, due to Irritation in the Jaws" He describes a number of cases of otalgia, in which he found the lesion to be in diseased teeth

The same number of the *Medical Record* contains an editorial on "Dead Teeth in the Jaws," which reads as follows "Perhaps the time is near at hand when medical men should be themselves better informed concerning diseases of the jaws and mouth, rather than refer the ailments of this region to individuals whose limited knowledge of medicine does not prevent them from "treating" dead teeth long after their presence in the jaws has given rise to alveolar abscesses and neuralgias, more or less painful It would not be strange if in the course of events, the day would soon come when all teeth without pulps, and hence, in process of more or less rapid decay, as well as those which the deposit of tarter or other cause, had entirely divested of periosteal nourishment would be promptly condemned as unfit to remain in the jaws—regarded in fact as foreign bodies, liable to give rise, not only to cerebral irritation and diseases in the organs of special sense, through the propagation of local disturbances in the mouth, to the regions mentioned, but to endanger likewise the general health, through purulent matter discharged into the mouth from alveolar abscesses, to be continuously swallowed for a long time, or, indeed, in some instances, to be absorbed, and thus produce septicæmic poisoning It is certainly grati-

fying to note the establishment of instruction in oral surgery in some of the schools, and it is to be hoped that this subject will receive the attention its importance demands "

Considering the peculiar structure of the teeth and their relation through the nervous system to the general organization, the close connection existing between the teeth, the rapidity with which the flash of sympathetic pain darts along the nervous cords which vitalizes them, the intolerable and protracted suffering which ensues, upon even trifling irritation of these sensitive filaments, and remember that pain itself is fully capable of deranging the whole economy, and inducing serious and fatal disorders, we might, without the aid of much reflection, adopt the very rational conclusion that the diseases of the teeth must be of considerable consequence to the entire organization We must also remember that the teeth were not made merely for ornament, but to perform certain specific functions, chief of which is mastication and insalivation, and that these are something more than mere forms of introduction to the stomach, that they are important to digestion, which is important to the entireness of organs, and the performance of function, and that if mastication and the insalivation accompanying it be imperfectly performed, some corresponding imperfection of digestion must result We also know the consequences of long continued morbid influences, however unimportant in their immediate action, that disturbance of digestion constantly repeated must sooner or later develop evils of a most serious character

The teeth are not as some seem to suppose, isolated organs, but they have an intimate and vital connection with the whole nervous system, and when the extremities of the nerves are exposed to irritation, whether by wounds of flesh or by decay of the teeth, there is a reaction upon the nervous centres, and various morbid conditions are a necessary consequence

Mastication is doubtless the primary function of the teeth, and should these organs be unable from decay or other morbid causes, to perform this office, the stomach is called upon to perform a double function, that of mastication and digestion, and while thus compelled to do its own work and that of the teeth also, it is much more liable to become disordered, and consequently the whole system may become deranged A stomach treated in this way for a considerable length of time must inevitably suffer But it is possible that some other organ may first indicate functional disturbance But should indigestion ensue from the effects of a morbid condition of the oral cavity, this deranges and impairs the whole system of nutrition and innervation, and sets to work a horrid train of morbid conditions, that render even existence itself almost intolerable

All of us, doubtless, are frequently called upon to witness the mouths of patients whose teeth are nearly all decayed, and many of them afflicted with alveolar abscesses, the gums inflamed and receding, extremely irritable and painful, the glands of the mouth disordered, the breath fetid, the saliva corrupt and extremely unhealthy, the teeth are in such a morbid condition that they cannot masticate their food, but mumble it in their mouths, where it mingles with that corrupt and vicious saliva, and with all the fetid, putrescent accumulations in the cavities of those stumps of teeth, and in this condition it passes into the stomach, where it mingles with the gastric juice, tending to vitiate the whole process of digestion

There are many other morbid conditions either developed or produced by dental irritation Mr Salter, in his Pathology and Surgery, in treating upon this subject, says "The affections of the nervous system dependent on the teeth, divide themselves into those which are reflex, secondary and remote, and those which are direct, immediate and from contiguity In the former category would rank epilepsy, neuralgia, paralysis, in the latter, local pain, facial palsy, some forms of amaurosis, etc In other instances, such as the exalted sensibility of the tegumentary nerves of the face, erratic pains through the maxillary nerves, associated with tooth ache, it might be difficult to say whether the phenomena are mostly reflex or direct, they probably comprise both conditions "

The situation of the teeth, and their abundant supply of nerves, and the great and diffuse swelling which their diseases produce in contiguous structures, inevitably involve much nervous disturbance and complication The inferior molars are but little removed from the tonsils, and Eustachian tube, from the parotid region and the external auditory passage The fangs of the superior molars are close to the orbit, and its all important contents, and more posteriorly they approach the spheno-maxillary fossa and fissure Thus is it easy to account for the nervous complications which are directly entailed by the spread of inflammation from the periosteum of diseased teeth

The several branches of the trigeminus appear to be the most susceptible of reflex affection, caused by dental irritation of one of them, but next to the different elements of the fifth nerve, the branches of the cervical and brachial plexuses are the most commonly involved—pains of the neck, shoulder, acromian process, insertion of the deltoid, bend of the elbow, are by no means uncommon, and with them occasionally a loss of motor power, a weary sense of fatigue in the flexor muscles, and an inability to grasp firmly with the hand

Pain is only one of the phenomena of reflex dental nerve irritation It may induce muscular spasm, *muscular paralysis, paralysis of some of the nerves of special sense, perverted nutrition*

As regards the teeth themselves, which excite this exalted nervous irritability, nearly all their diseases appear capable of causing this condition

Caries with or without exposure of the pulp exostosis, hypertrophy of the cementum, nodular developments of dentine in the pulp cavity, periostitis, plastic or suppurative, impaction of permanent teeth in the maxillary bone, crowding of teeth for want of room

Each and all of the above mentioned pathological conditions of the teeth may and have caused many-

festations of reflex nervous irritation, though they may exist in a severe form without producing any such result

Of the nervous and complicated morbid conditions produced from dental diseases, the following may be mentioned as occurring less frequently than those above mentioned Chronic trismus, epilepsy, tetanus, partial paralysis, amaurosis, deafness, opthalmia, and perverted nutrition

It is not deemed necessary to occupy your time in the narration of cases illustrating the foregoing observations, but I will refer you to the works of Salter, Bond, Garrison, and our periodical literature, where they may be found and read at your leisure

From the foregoing observations, it is surely very important that the physician should never disregard the dental organs as agencies in the production or continuance of diseases, and it should also deeply impress the dental practitioner with the importance of a clear and comprehensive knowledge of the entire organism, both in health and in a diseased condition He should ever bear in mind that his operations are not upon isolated organs merely, but upon organs bearing very intimate and close sympathetic relations to the entire economy

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PISTOL-SHOT WOUND OF THE ABDOMEN, LAPAROTOMY AND SUTURE OF THE WOUNDED INTESTINES

Read before the Medical Society of Virginia, October 22, 1887,

BY A S PRIDDY, M D,

OF KEYSVILLE, VA

Ras Wimbish, a negro, aged 60 years, was twice shot by his employer, with whom he was engaged in an altercation, on September 4, 1887, about 8 P M, with a Smith & Wesson revolver, 32 calibre, at a distance of six or eight feet The shooting occurred on a farm in Mecklenburg county, about four miles from the town of Chase City The wounded man, at the last discharge of the pistol, exclaimed that he was shot, ran to the stables, mounted a horse, and rode into town where his family lived, "to get a doctor to cut the balls out" Dr C W Walker was called in, and found him falling into a state of profound shock, from which it was several hours before he began to rally He was, after recovering from the shock, very restless, with an anxious countenance, much thirst, pulse quick and weak, and hiccoughed slightly, though vomited none Dr Walker administered ⅓ grain of morphia, and proceeded to examine him

He found that the first shot had entered the fleshy portion of the thigh, and passing through was lodged under the skin on posterior aspect, from which it was easily extracted The second shot had taken effect about one half inch below the anterior superior spine of the ilium, toward the abdomen, the point of entry being small, presenting a jagged appearance, and was sealed with a clot of blood Abdominal palpation revealed nothing wrong, except considerable pain on pressure

He complained of an excruciating pain in abdomen The track of the ball was not fully explored with a metallic probe, as it was quite certain, from its direction, that it had entered the abdominal cavity The man was put to bed and the usual "ostrich plan" of treatment pursued, that is, warm applications to the bowels, and sufficient opium to control pain, to await developments in the case

On the next morning the patient was found to have passed a fairly comfortable night, under opium He had voided a large quantity of clear urine, but his bowels had not moved since the shooting The abdominal pain and tenderness had increased The abdomen had become very tympanitic and emphysematous, which symptoms were attributed to a gaseous distension of the abdominal walls, or of the intestines This condition was of such importance as to make death seem imminent from dyspnœa

Thus things continued dyspnœa, hiccough, occasional retching and vomiting, slightly elevated temperature, and an obstinate constipation, till the third day after the shooting, when a cathartic was given which in due time produced several evacuations, containing considerable blood This made intestinal perforation certain beyond cavil After this the tympanitic condition of the abdomen disappeared considerably for nearly twenty four hours, after which the before mentioned condition again became just as alarming, and so continued

On September 8th, the fourth day after the shooting, Dr F J Gregory, of this place, and I were telegraphed for We arrived about 9 o'clock that night, and found the man in the condition before mentioned, and according to Dr Walker he was growing weaker There were also slight peritonitic symptoms We advised an exploratory incision, with several objects in view first, to relieve the gaseous distension, which was fast causing his death from dyspnœa, to cleanse the cavity of all extravasations and to repair damage to the wounded viscera, and give free drainage, which might lessen his chances of death from suppurative peritonitis, septicæmia, etc, or at least make his time of living more comfortable, and his death one not attended with so much suffering These views were concurred in by Dr Walker, though we thought that the "golden opportunity" had been lost by waiting so long Yet, at earnest solicitation of the wounded man to give him every known chance for his life, however slight that chance might be, we decided on a laparotomy the next morning, provided the man were living

The operation was performed on September 9th, the patient being still alive I made preparations for the operation, which were about as complete as could be made in a *negro cabin*, but not so elegant as some of our well equipped city hospitals afford The instruments were placed in a 5 per cent solution of carbolic acid, and the sponges thoroughly washed out in that solution The hands and nails of all the participants in the operation were cleansed with soap and water, and then dipped in carbolized oil The toilet of the abdomen was made by scouring the walls, shaving the pubes, and washing the whole over with a 5 per cent solution of carbolic

acid, especial attention being paid to the navel and point of entry of the ball

The sponges were next placed in bichloride solution in water 1–1500 Plenty of towels were also provided in same warm solution

At 10 o'clock, in the presence of and assisted by Drs Gregory, Walker, H H Jones, W B Jones, and Mr Ogburn, after the hypodermic administration of ⅓ gr of morphia and 1 100 gr atropia, chloroform was administered and the operation begun An incision was made in the median line from the umbilicus to the symphisis pubis, down to the peritoneum, which was incised after the capillary bleeding had been stopped by pressure with sponges wrung out of hot bichloride solution On opening the peritoneum a considerable quantity of bloody serum, pus, etc , escaped from the cavity, all of which had a distinct and disagreeable fœcal odor, yet there was only a trace of fœcal matter in the cavity I then introduced my hand into the cavity and slowly drew out the intestines, examining each coil carefully till I came to the jejunum, on whose mesentery I noticed a contusion about the size of a silver dime, which was evidently the point at which the force of the ball had spent itself When the descending colon was reached it was found to be lacerated longitudinally for more than six inches, extending into the sigmoid flexure I passed my whole hand through the wound in this intestine, into the rectum The meso colon was also found perforated The intestines were wrapped in towels wrung out of the hot bichloride solution, during the operation, and the normal temperature preserved so far as possible

The lacerated gut was united by a continuous suture of catgut, which was improvised by soaking a fiddle string in water the night before, and then soaking a while in carbolized oil The abdominal cavity was washed out with the bichloride in water 1–1500, and then thoroughly sponged out

The wounds, both in the gut and mesentery, were packed with iodoform I did not think it necessary to excise the wounded mesentery The intestines, after having been thoroughly cleansed, were returned to the cavity A Nèlaton's soft rubber catheter, No 12, was "nicked" in several places, and introduced into cavity as a drainage tube The abdominal incision was closed with seven sutures of white silk, which included the peritoneum Adhesive strips were then applied to the abdomen The wound was dressed with iodoform, and a large cotton pad covered the whole abdomen

The operation lasted about fifty five minutes, which was a rather shorter time than I intended to take, but the man came near dying under the operation, and was only stimulated by several hypodermic injections of arom spts ammonia and brandy, and, with a little speed in the operation on my part, came out very well He was immediately put to bed, and hot rocks applied to his extremities and epigastrium Whiskey or brandy were given freely, and in due time reaction came on freely He was ordered milk and raw eggs for food, and this food *alone*, with stimulants of whiskey or brandy when needed Morphia in ¼ gr doses was ordered every three or four hours, to control pain and lock up his bowels

At 3 o'clock P M that day his temperature was 100°, pulse 110, respiration normal and easy, slight hiccough, no tympanites, lays with legs extended, suffered little pain

Sept 10, 8 A M —Seen by Dr Walker Temperature 100°, pulse 135 Tongue coated, anxious countenance, no peritonitic symptoms Spent a moderately comfortable night under morphia Think he may live through to day Dr Walker was summoned before the court to testify in the case and did not see him again until 6 P M , when he found him almost completely exhausted, pulse about 180, no volume, and scarcely perceptible Skin bathed in a cold, clammy sweat, extremities very cold Did not think it possible for him to live through the night Ordered milk and whiskey every few minutes through the night, and hot rocks to his feet

Sept 11, 8 A M —Seen by Dr W , who found a marked improvement in his condition, had spent a very comfortable night when not taking the nourishment Temperature normal, pulse 135 respiration free and easy, extremities warm No peritonitis Could turn over in bed Took nourishment of milk and whiskey regularly and with apparent relish Some little colicky pains in abdomen relieved by morphia He continued to do well throughout the day, and took a supper of rice, contrary to our directions

Sept 12, 8 A M —Rested well last night under morphia Temperature normal, pulse 120, with good volume Tongue clean, no peritonitis, suffering no pain , the abdominal wound suppurating quite freely, drainage-tube doing good work

6 P M —Dr Walker found him doing well No change in condition except that he had a large solid evacuation of the bowels, which caused very little pain or tenesmus, contained no blood nor mucus

Sept 13, 8 A M —Seen by me for the first time since the operation Found him comparatively comfortable, temperature normal, pulse 100, full and strong Could turn over in bed or lie on either side Kept flies off himself I removed the dressings from the abdomen and found that the abdominal wound had united entirely down to fourth suture Washed the abdomen off with carbolized water and applied clean cotton, after dressing the wound with iodoform He did well the whole day

Sept 14, 8 A M —Seen by Dr Walker Rested well the night before with ¼ gr morphia Had taken sufficient food of milk and eggs Temperature normal, pulse 100, good volume, had a solid evacuation, which griped him considerably

Sept 15, 8 A M —Did not take any morphia last night, and spent quite a restless night Some little tenderness over bowels, but doing well in other respects Left a dose of morphia for him to take at night

Sept 16, 8 A M —Seen by Dr Walker Rested well last night Comfortable, pulse 100, temperature normal, tongue glazed and red, extremities a little cold Noticed a continuous discharge, of a muco purulent nature, from the anus

Sept 17, 8 A M —Seen by Dr Walker and me Found him beginning to show some signs of exhaustion Pulse 110 and feeble, temperature subnormal, extremities rather cold, all of which symptoms were due to the poor attention to his food and other nursing, which his ignorant and indifferent family gave Dr W B Jones consented to nurse and feed him properly, which he did, and marked improvement at once followed

Sept 19, 8 A M —Doing well Wound entirely united Removed drainage tube and took out all of the sutures and applied adhesive strips Takes food of milk, eggs, peptonized beef, soups, etc

Sept 20 —Doing well, and from this time the improvement was steady and uneventful, he being able to take solid food Sleeps well and has sat up on one or two occasions The point of entry of bullet commenced suppurating about October 1, and was very superficial, being due to some little foreign substance being carried in, and was relieved by syringing the hole out with a 3 per cent solution of carbolic acid in water

I saw him on October 12, which was a few days prior to the writing of this report, and found him, to all outward appearances, entirely well of the wound and the operation, but feeble, and suffering at the time from an attack of diarrhœa which, I think, was in no way dependent on the wound, but rather to be attributed to some improper article of food given him, and to bad nursing in general His age, 60 years, the poor attention paid him by his family, who are entirely indifferent as to his ultimate recovery, and the confinement in the house and bed, tend to make his recovery of former strength and activity necessarily slow But as I have said before, at this time, nearly six weeks after the shooting, he is practically well of the injury

Remarks —Although the profession is much interested in this branch of surgery, yet the literature on it is of necessity very meagre, for it was only in 1881, that Dr R A Kinloch, of Charleston, S C, first performed laparotomy for gunshot wounds of the abdomen, and only in 1883, that Kocher, of Berne, and 1884 that Dr W T Bull, of New York, performed the first two successful cases on record I have not mentioned the case reported and recorded in the "Medical and Surgical History of the War of the Rebellion," which Dr Kinloch performed in 1863 on a confederate soldier for a gunshot wound sustained seven months previous to the operation, and which was entirely successful, the man living several years after the war, but I think this operation was more for disease than for traumatism, and should so be regarded

Of all the cases of laparotomy reported—and I think there are only fifty seven—I think my case presents some points of interest which are not seen in the others There may have been more viscera injured in some other reported cases, and I think Dr Keen, of Philadelphia, reported last April a case in Vineland, N J, in which the stomach, colon, ileum and kidney were wounded, from which the patient died on the fifteenth day There are also several other cases in which the stomach was perforated, and another in which the liver was wounded

But my case presented a larger wound in the intestine, and was operated on after the fifth day of the injury, and the patient was just being attacked with peritonitis, and of which tended to make the man's chances of recovery infinitesimally small

One remarkable feature in the case is, I think, the very small quantity of fæcal matter found in the cavity, which can be explained by saying that the man ate an early dinner, and had eaten no supper so nearly eight hours had elapsed since the last food was taken, and consequently the contents of the bowels had sought the lowest portion of the tract, and had passed to a part below the site of injury The bowels were evacuated in the early part of that day

My case and the case of Dr Kollock, of Cheraw, S C, are the only two cases that have been operated on in negro cabins, where the surgeon labors under a great many disadvantages The negroes are, as we all know, very ignorant and careless, and good after treatment is from them an impossibility And in the country it is very inconvenient and sometimes impossible for the surgeon to see his patients so often as necessary

I have reported this case merely to show under what unfavorable circumstances this operation may be undertaken, and to what a satisfactory termination it may be brought, for were the man to die now the operation has certainly saved him six or seven weeks of life, when, on the contrary, it would have been impossible for him to have lived but a few hours without the operation, for fœcal extravasation would have been almost sure to have followed, and as I have said before, peritonitis had begun to set in Even if the wounds be of such gravity as to make recovery impossible, as Dr Kinloch well says, "next to the cure of disease we look to the satisfaction coming of a painless death" by this operation The patient will certainly die an almost painless death, which will well repay any one for the trouble and risk in undertaking the operation

I hope that this case, with other reported cases, may encourage any and every physician, whether living in the city or country, to lay aside the old *passive* line of treatment, and offer to a man with any abdominal traumatism *whatever*, the chances for his life offered in this day of antiseptic surgery, and not until he has done this will he be free from all responsibility

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A CASE OF EXTIRPATION OF THE KIDNEY, WITH REMARKS [1]

BY L H DUNNING, M D,
OF SOUTH BEND IND

The patient, Mrs H, aged 46, underwent the operation of nephrorraphy Oct 30, 1884 The history of this case was published in Feb, 1885 [2] The kidney was fixed at the time of the operation by eight sutures, three of which passed through and included the renal

[1] Read by Title before the Indiana State Medical Society
[2] THE JOURNAL Feb 21, 1885

capsule These latter untied and loosened within the first 24 hours after the operation, and on this account I think the kidney was not firmly anchored However, three months after date of the operation the kidney was movable only to the extent of one inch in a transverse direction

The symptoms for the relief of which nephrorraphy was done, pain and vomiting, were for a time relieved, but after a few months gradually returned, and at the end of one year were more severe than they were before any operative procedure was resorted to During the last year they have progressively increased until they had become so grave as to threaten the life of the patient The pain is located upon the right side in the hypochondrium and right lumbar region and sometimes extends downwards into the right groin and hip The pain is for the most part of a dragging, pulling character, though sharp lancinating pains sometimes shoot through the right side Vomiting occurs three or four times after each meal For the relief of the vomiting every known means at our command has been used including diet, medicine and lavage, all to no avail

The patient has become much emaciated though not bed-ridden The abdominal walls are so much relaxed that the outlines of the lower border of the liver can be easily felt, and the left kidney, though entirely fixed and normal, can be unmistakably and distinctly palpated To this fact numerous physicians of our city will bear testimony as they were invited to examine the patient on account of this rare condition

Frequent examination of the urine had revealed nothing abnormal except that at times it would be scanty and of high specific gravity, and at other times very abundant and of low specific gravity

On Feb 22, 1887, assisted by Drs Hitchcock and Burchard, the kidney was extirpated by the writer Two incisions were employed, one transverse commencing two inches to right of spinal column, and extending four inches in a direction nearly parallel to the twelfth rib, and about one half an inch below it, the other a vertical one beginning at the starting point of the first one and extending downward to the crest of the ileum

By means of these incisions the kidney was easily reached though we experienced some difficulty in keeping the colon out of the way The perirenal adipose tissue was torn through, and the kidney invested by its capsule brought into the incision It was carefully examined for calculus both by touch and with the needle, but none was found The pedicle was tied first with a double ligature, *i e*, one around the ureter and another around the vessels, then a stout ligature including both The pedicle was then cut off next to the kidney and dropped

There being no hæmorrhage the wound was quickly closed by sutures A drainage tube was left in the wound, and an antiseptic dressing applied The patient rallied well, and went on to a speedy recovery For the first few days she was nourished almost entirely by enemas After a few days lime water and milk were given in small quantities and retained After a time beef extract was given, then boiled rice The remaining kidney took the double work thrown upon it and performed it without apparent disturbance The wound healed speedily with little suppuration All circumstances combined to make the patient's recovery both safe and comfortable, so that at the end of four weeks she was able to leave her bed a part of the time

The kidney which was removed was carefully examined by Dr Hitchcock, who reported to the writer that the kidney was normal in every respect except that upon the posterior surface near the external border there was found cicatricial tissue limited to an area one inch long, a quarter of an inch wide and a quarter of an inch deep The weight of the kidney was five ounces The accompanying table is an accurate record of the case for thirty days after the operation It may be found to contain some points of interest, particularly the action of the left kidney

Record of Pulse, Temperature, etc, in a case of Nephrectomy for 30 days after the Operation Patient aged 46 years Operation Feb 22, 1887, 8 30 a m

22, 12 M Temperature 97 5 Pulse 62 Patient rallied somewhat, very drowsy surface warm, considerable nausea, urinated at 8 A M, before operation 4 P M Temp 99 5 Pulse 78 Catheterized and drew 10 oz clear, light straw colored urine, complains of pain, gave tr digitalis gtt j hyoscyamus fld ext gtts ij every 2 hours 8 30 P M Temp 99 Pulse 90 Catheter, urine 6 oz, vomited, considerable pain in hypochondrium Prescribed chloral per rectum and bismuth sub nit per orem

23, 7 30 A M Temp 97 5 Pulse 84 Comfortable night, catheter, 12 oz healthy looking urine, vomits considerable Continued bismuth and chloral and prescribed ox cerium in gr x doses every 2 hours 1 P M Temp 98 5 Pulse 72 6 oz urine, vomited once Rectal alimentation every 4 hours 8 30 P M Temp 98 4 Pulse 78 Catheter, urine 5 oz, sp gr 1020, normal color, looks well, drinks little water Continued enemas, ordered 2 or 3 teaspoonfuls milk and lime water, continued ox cerium

24, 7 30 A M Temp 99 Pulse 79 Urine 17 oz, sp gr 1019, normal color, has taken 3 teaspoonfuls lime water and milk every 2 hours and no vomiting, everything favorable 1 30 P M Temp 98 5 Pulse 69 Catheter, 13 oz urine, no vomiting Enema of one quart water which caused light liquid movement, patient feels well Continued treatment 8 30 P M Temperature 98 8 Pulse 74 17 oz urine, normal, no vomiting

25, 7 30 A M Temp 98 5 Pulse 74 Rested well, 14 oz urine Dressed wound, dressing soiled with bloody serum but not offensive, left in tube 1 30 P M Temp 99 6 Pulse 84 12 oz urine passed voluntarily, some headache, she now takes 4 tablespoonfuls of milk every 2 hours without vomiting 8 P M Temp 98 5 Pulse 80 10 oz urine, normal, nourishment same Ordered cathartic

26, 7 A M Temp 98 5 Pulse 76 14 oz urine More cathartic given 4 45 P M Temp 99 2 Pulse 80 12 oz. urine, sp gr 1018, acid, no albumin nor pus, bowels moved well, no vomiting

27, 8 30 A M Temp 98 Pulse 72 12 oz urine, bowels acted several times, wound dressed, little pus, ½ drachm, removed tube, wound apparently healed except tube track, no vomiting Ordered ℥ iij of milk every 3 hours 5 P M Temp 99 8 Pulse 96 12 oz urine, slight nausea, no vomiting

28 7 30 A M Temp 98 8 Pulse 84 Urine 14 oz, sp gr 1020, acid, normal color, bowels acted last night 4 30 P M Temp 99 5 Pulse 88 Urine 8 oz, 5 ozs milk now swallowed and relished Continued enemas

March 1, 7 30 A M Temp 98 5 Pulse 84. 14 oz. urine, sp gr 1026, more nourishment, no vomiting Removed stitches, wound healed by first intention over four fifths extent

3 Temperature 99 Pulse 84 Patient is taking more nourishment without vomiting and with relish, urine voided in last 24 hours 28 oz, of sp gr 1027, normal in color and odor

5 8 A M Temp 98 2 Pulse 72 18 oz urine during last 24 hours, it is turbid, sp gr 1029, nourishment retained, bowels

constipated Ordered cathartic 6 P M Temp 99 Pulse 84 Cathartic acted, producing 4 copious discharges attended with much pain Gave chloral anodyne to relieve pain and it set up vomiting

7 Temp 98 5 Pulse 74 Patient better, vomiting ceased, 32 oz urine, sp gr 1022, wound healed

8 7 30 Temp 98 5 Pulse 78 32 oz. urine in last 24 hours, bowels moved by enema, nourishment retained, patient looks well

9 Temperature 98 5 Pulse 72 Had headache during night, better to day, 24 oz urine, no appetite.

11 Temp 98 5 Pulse 78 Bowels moved by enema, sat up in bed last night Urine 24 oz

15 Temp 98 5 Pulse 72 Urine abundant, ate egg, toast and milk for dinner and did not vomit, sat up in bed

21 Temp 98 6 Pulse 72 Sits up once a day, walks a little, complains of pain in right hypochondrium, hip and leg, inclined to vomit if she lies upon her right side soon after taking nourishment but at no other time eats well and retains food

Nearly three months have passed since the operation, and it may be of interest to note the condition of the patient at the present time She is up and around the house doing a little light work She takes liberal quantities of milk, eggs and old bread, and seldom vomits if she restricts herself to those articles She has gained several pounds in weight during the last six weeks The remaining kidney does the work of both with apparent ease She complains of considerable pain in the loin, through the scar, and there is some tenderness in the right hypochondrium Except the pain, for which I am at loss to account, her condition is greatly improved and we may truly say that the nephrectomy was to her a decided benefit

One case, be it ever so successful, cannot furnish a rule for action, it can only be suggestive This one is reported in order to add one to the number still too small to definitely settle all important questions growing out of the operation To the writer this has been an exceedingly instructive case, and in meditating upon it he has concluded that its history tends to throw some light upon a few dark points needing illumination

1 A healthy kidney, if movable, may induce an excessive and persistent vomiting which can only be relieved by removing the offending organ Here a carefully regulated diet, medicine, lavage, pads, friction and counter irritants were all used with no avail Nephrectomy stopped the vomiting

2 Nephrorraphy may place the patient in a worse condition than she was before the operation Mrs H suffered more pain and vomited more after the operation for anchoring the kidney than she did before it was done The reason of this the writer thinks can be easily explained When the kidney was exposed for its removal it was found surrounded by an envelope that had the appearance of the normal peri renal adipose tissue, with bands running through it in all directions of a pinkish white, glistening tissue, reminding one of scar or fibrous tissue These bands were undoubted cicatricial tissue or bands of adhesion resulting from the operation of nephrorraphy These bands reached out in all directions from the kidney to the surrounding structures and formed attachments to them This was very apparent in respect to the liver, the colon and the structures posterior to the kidney and it was thought with the duodenum, though not seen Here the writer believes is an explanation of the great amount of pain present notwithstanding the movements of the kidney were much less than they were before it was fixed

Every movement of the kidney beyond certain circumscribed limits caused tension of the bands of adhesion, and if carried far enough pulled upon the colon and under surface of the liver and probably the duodenum

3 In cases similar to the one the writer is here describing it is his belief that some treatment of the peri renal adipose tissue different than that usually employed should be adopted In a preceding paragraph the extensive attachments of this structure and the visible evidence of former inflammation in the structure itself were both stated In the removal of the kidney it is necessary to tear through this tissue and if it be attached by inflammatory adhesions to the capsule proper of the kidney, which it frequently is, extensive injury to the structure must occur which must result in further inflammatory adhesions

Let us bear in mind another fact after the removal of the kidney the cavity thereby left in the investments will be wholly or partly obliterated by the collapsing of its walls, and these walls are made up of the structures under discussion so that there would be bands of adhesion extending in various directions from a central mass In consequence of this the movement of one organ may be felt by a distant organ, or in consequence of the contraction of the cicatricial tissue the liver, transverse colon and duodenum on the right may be brought too closely together or their movements be too much restricted to be compatible with perfect health or freedom from pain The remedy for this possible result may, the writer thinks, be found in the removal of the whole or part of the peri renal adipose tissue In the case of Mrs H this could easily have been done, but that there could possibly be any advantage in this did not occur to the writer Should another opportunity present itself it will be resorted to and the result duly reported

4 In this case the deep sutures used in nephrorraphy undoubtedly passed through the cortical portion of kidney to the depth of ⅛ or ¼ inch and no extensive disease of the organ resulted A small part of the organ was however entirely destroyed, being displaced by cicatricial tissue This result tends to verify the statements made by the writer in a previous article [3] That it is exceedingly difficult in the operation of nephrorraphy to pass the sutures beneath the renal capsule without injuring the cortical portion of the kidney since in this instance great care was used not to injure that structure It tends too to justify the procedure of Morris, who recently reported a case of nephrorraphy in which he passed a deep suture through the capsule and cortical portion of the posterior and upper surface of the kidney, and although albumin appeared for a few days in the urine a permanent fixation and complete recovery resulted

[3] The Journal, Feb 21, 1885

A NEW FORM OF SUTURE PIN FOR USE IN PERINEORRHAPHY

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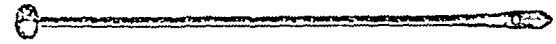
After employing the old method of operation for the repair of laceration of the perineum in something more than fifty cases, I became satisfied that some method might be devised whereby the patient would be subjected to less suffering, and the surgeon less uneasiness respecting the results The chief cause of pain always seemed to be a swelling of the tissues from the strangulation induced by the wire sutures, which was frequently increased by more or less cutting of the skin in spite of the nicest care in the adjustment of the sutures and avoidance of unnecessary strain I noted that some of our best operators, in their writings upon the subject, referred to this swelling as a necessary result of the operation, and regarded opiates in some form as on this account necessary in the management of cases of this sort This led me to believe the swelling to be due to the plan of operation, and not to any individual fault of my own I found the opium very objectionable, both from its unpleasant after effects, and from its apparent immediate effects in delaying the reparative effort Fearing to make a very radical innovation, and with much timidity, I gradually lessened the number of wire sutures employed, using superficial silk or catgut sutures, until I reduced the wire sutures to one, and this I did not bury in the tissues, but carried through the mucous membrane, exposing it for at least an inch upon the vaginal surface, about one and one-half inches from the introitus vaginæ By thus giving a broad bearing surface, I was pleased to find much less swelling of the parts, and corresponding comfort to the patient, and more speedy union of the tissues Subsequently, I dispensed with the wire suture altogether, except in a case of complete laceration in which from previous unsuccessful operations or from the great length of time which had elapsed since the laceration occurred, there was great scarcity of tissue and difficulty in holding the parts in good coaptation

I had followed this method with most satisfactory results in more than 100 cases, when my attention was called to the form of pin devised by Dr H O Marcy The great advantage secured by the ingenious device of Dr Marcy in securing lateral pressure upon the wound, and wholly preventing the strangulation of the tissues often unavoidable by the old method, was to me at once apparent I had found my own method so satisfactory, in these regards, however, that I continued to employ it until a few weeks ago, when it occurred to me that I would try the pin Being obliged to operate before I could provide myself with one of Dr Marcy's pins, I had a set of pins made for me by a jeweler, using platinum wire, it occurred to me to have them made after what I suppose to be a new fashion, viz, in the form of a hare lip pin with an eye near the point, by means of which the inner extremities of the needle may be secured together by silk or silver wire, and held as closely together as may be required I found that the pins answered the purpose admirably By securing the inner ends of the pins in close proximity, any desired degree of pressure may be made upon the sides of the wound by simply bringing together the outer ends of the pins and securing them by means of silver wire wound first around each pin and then twisted together The advantage which these pins possess in common with other forms of pins used for the same purpose are chiefly these

1 They secure lateral pressure of the wound, thus spreading out the tissues instead of drawing them together, and by this means securing union in such a manner as to produce a thicker and more nearly normal perineum than is ordinarily obtainable by the old method

2 They effectually prevent the swelling of the tissues so constantly present in cases treated by the old method, and thus contribute to the comfort of the patient and diminish the liability to destructive inflammation, and septic poisoning

3 They are not likely to cut or otherwise injure the tissues



I have not used any other form of pin, and hence, cannot speak except from theoretical considerations, but it has seemed to me that the form of pin here presented has at least the following advantages over other forms

1 The readiness with which it may be introduced and secured in position

2 The perfect adjustment of pressure which may be secured Even very severe hæmorrhage may be controlled, as the pressure may be made as great as desired for a few hours subsequent to the operation, being lessened with the greatest facility at any subsequent time as may be considered desirable, by simply separating the outer ends of the pins I have had occasion to perform perineorrhaphy only six times since devising these pins, and hence, my experience with them is as yet very limited, but the results have been so excellent that I hope they may prove to be a serviceable addition to the surgery of the female perineum I may further remark that in the use of the pins I do not rely wholly upon them for holding the wound in coaptation, but carefully join the edges of the mucous membrane and skin by fine silk or catgut sutures, taking pains to cover completely the denuded surface I depend upon the pins to control bleeding and hold the centre of the wound firmly together The pins give little or no pain, and may be removed on the fifth day I have found platinum to be too soft and flexible, and now use steel or brass pins, nickel-plated I fancied that some inconvenience might be experienced by the patient from the points of the pins exposed in the vagina, but have found no complaint of pain from this cause If the direction of these pins is correct they will lie almost parallel with the axis of the vagina, and with the portion exposed in the vagina resting flat upon the posterior vaginal wall

MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS — The fourth division made by VOLKMANN (see the preceding numbers of THE JOURNAL) is *Tuberculosis of Bones, Joints, and Tendon sheaths*

17 Everything that has hitherto been called caries of bones, Padarthrocace, spina ventosa, scrofulous inflammation of joints and bones, tumor albus, fungus articuli, strumous affection of joints (English), in most recent time designated, on Billroth's precedent as fungous inflammation of bones and joints, belongs, with very few exceptions, to genuine tuberculosis

18 As an etiological moment in the origin of chronic suppurative affections of bone and joints, a series of other infectious diseases has to be considered, most of them, however, begin acute, to become chronic only in their farther course The most frequent of these, *infectious osteo myelitis*, often, as we know, leading to suppuration of the joint and destruction of the articular cartilages, presents such a characteristic clinical picture, even when not acute from the beginning nor accompanied by violent symptoms, that diagnostic difficulties can only arise in the more rare form of osteo myelitis epiphysaria, or when the process is localized in the short bones

Cases of joint and bone suppuration in syphilis, rheumatic fever and all kinds of septic infection, are also easily distinguished from the tuberculous forms

In the so called *metastatic inflammations* of joints after acute exanthemata are mainly the cause of difficulty in deciding their character, so soon as they have gone so far as to cause suppuration and destruction of the joint Some of these cases simply mean septic or pyæmic processes, others are undoubtedly tuberculoses, which develop while the acute exanthem still exists, or they closely follow it, and often begin very acute The question is, therefore, how far in acute exanthemata do suppurative and destructive inflammations of the joints exist, really caused by the specific (exanthematic) poison?

19 *Tuberculous affections of joints* start primarily either from the bones or from the synovial membrane,

The primary osseous form is most frequent, particularly in children It begins in the bony epiphyses by the formation of circumscribed tuberculous foci, which remain small, as a rule, and do not exceed the size of a pea or that of a hazelnut Diffuse cheesy infiltrations of a larger area of the spongiosa are much more rare In the beginning, therefore, the trouble is not a joint affection at all, but one of the bone, and may remain as such when the tuberculous foci do not soften or suppurate, or when the foci perforate extra articular instead of into the joint At any rate, the purely osteopathic stage may drag along for an uncertain length of time before the specific affection, the infection of the joint, follows This first occurs when the products of the cheesy degeneration and the tuberculous suppuration of the bone reach into the joint

Tuberculous foci in the spongiosa, particularly in children, have a great tendency to mortify *in toto*, and become separated as characteristic, cheesy, concrement like sequestra The process of demarcation that then takes place has evidently a very good effect, forming as it does a barrier of granulations, the innermost layers of which are found regularly studded with masses of miliary tubercles, which, however, at the same time protect the neighboring bone from further infection Cheesy sequestra and masses of pus found in tuberculous bone cavities only seldom give rise to new (secondary) tuberculous eruptions and infiltrations in the neighboring spongiosa Not infrequently several of these tuberculous osseous foci are present (generally not more than 2 or 3), sometimes in the same epiphysis, sometimes in both articular extremities at the same time They have certain places of predilection, as the olecranon, the iliac portion of the acetabulum, etc., though the relative frequency is not yet decided by exact statistical researches

20 *The primary synovial form of tubercular joint affections* is particularly to be found in adults, and more especially in old people this form prefers certain joints, as the knee for example

The miliary tubercles, which infiltrate the synovialis densely, are developed either with or without simultaneous growth of vessels and granulations In the first case the common fungous form is present, in the second sluggish suppuration of the joint, designated by the older authors as cold abscess of the joints, etc, much more frequently seen in older people, and offers an especially unfavorable prognosis

21 Sometimes larger, isolated knots of tubercles develop in the synovialis, reaching to the size of an almond or even to that of a pigeon's egg, and becoming pediculated may project into the joint The remainder of the synovialis may be free from tubercles from the beginning, but will generally later on become infiltrated with miliary eruptions Even in the last mentioned cases healing is possible after extirpation of the knots and short drainage of the joint

22 An important question is, How far may inflammations (originally not tuberculous) of joints become tuberculous in their further course? At the present time this is known only in the somewhat rare cases of fibrinous synovitis with the formation of rice like bodies (corpuscula oryzoidea), and in cases of chronic hydropsies with hyperplastic growth of fatty masses (With regard to tuberculous affections of joints after distorsion, especially of the hand and foot, see below)

23 Tuberculous inflammations of joints, whether primarily originating from the synovialis or from the bone do not necessarily, even in their gravest forms, lead to extensive defects of the bone (caries sicca) followed by suppuration in the joint and abscesses But sometimes the enormous eruption of tubercles in the tissue of the synovialis causes a copious watery exudation—hydrops tuberculosus —*Langenbeck's Archiv*, Bd 33, Hft 1

FRACTURE OF THE SKULL BY CONTRE COUP —By

PAUL BERGER (Paris) and MLLE A KLUMKE (Paris) This paper contains a minute discussion of a case from which the following conclusions are deduced 1 Independent fractures of the base of the skull, produced at a distance from the point of application of external violence on the skull exist 2 These fractures occupy by preference the orbital prominences, the lesser wings of the sphenoid, and the cribriform plate, they may also involve the petrous portion of the temporal bone 3 They appear to result from the mechanism assigned by Perrin to fractures of the skull by *contre coup* 4 Intra cranial effusions of blood situated between the dura mater and the skull, determined by the rupture of the middle meningeal artery at the level of a fracture, may occupy the lower region of the middle fossa of the skull and be accompanied by no sign of cerebral compression, even when they attain a considerable volume 5 Consecutive to a traumatism, a hæmorrhagic focus may be observed in the cerebral substance, produced by *contre coup* at a point opposite to that where the violence was applied, without its being possible to invoke the displacement of the cerebro spinal fluid as the cause of its production 6 In recent and considerable traumatisms, there may exist a clearly defined aphasia, without there being any appreciable lesion of the convolution of Broca, of the foot of this convolution, or of the convolutions of the island of Reil 7 It is impossible then in case of recent traumatism affecting the skull, to depend either exclusively or even principally upon this symptom, to affirm the desirability of trephining or to determine the point for the application of the instrument —*Revue de chirurgie*, February, 1887 —*Annals of Surgery*, August, 1887

BULLET WOUND OF THE LIVER —At the meeting of the Clinical Society of London, on October 14, DR LEDIARD (Carlisle) contributed this case, which was one in which a constable was shot through the body, at a short distance, whilst pursuing some burglars The bullet entered the right side of the chest, between the seventh and eighth ribs, a little to the outer side of the mammary line Deep collapse resulted, during which the bullet was extracted from the right loin, just over the last rib, and two inches from the spine It was believed that the constable was leaning forward to catch a man in front of him when he received his wound Jaundice supervened, and on the ninth day the extraction-wound in the back discharged a large amount of bile-stained fluid, and continued to do so to a less extent for some weeks Evidence of air in the right pleural cavity to a limited area was also present, and subsequently an empyema formed and discharged freely a large amount of pus through the bronchi Elevation of temperature lasted more or less for fifty eight days, but at the end of three months the patient was convalescent, and had made a complete recovery, being still in the Cumberland police The course of the bullet was, probably, through the convex surface of the liver, the diaphragm being perforated twice, and the lung grazed The presence of bile was ascertained by chemical tests, corroborated by Dr Walker, of Newcastle, public analyst for Carlisle The microscope also gave clear evidence of a wound of the liver tissue The bullet was a large one, and weighed 3½ drachms —*British Medical Journal*, Oct 22, 1887

THE URINE IN TABES DORSALIS —The following facts are set forth by MM LIVON and ALEZAIS as the result of a series of researches on the urine of patients affected with an apyrexial disease of the cord —namely, tabes dorsalis A tendency to diminution of the urea eliminated in the twenty four hours, a diminution in the total daily discharge of phosphoric acid, with a tendency to proportional augmentation of the discharge of earthy phosphates, a great variation in the elimination of chlorine, with a bias in favor of hyperchloruria Intravenous injections of tabetic urines appear to be sufficiently toxic in their action, since it has been found that from twelve to twenty-four cubic centimetres of urine per kilo gramme of body weight of animals was sufficient to kill dogs —*Lancet*, Oct 15, 1887

HÆMOSTATIC MIXTURE —PARVESI recommends the following as a hæmostatic mixture in gynecological operations, as being efficient and non irritating

Sulpho carbolic acid	25 parts
Rectified alcohol	25 "
Benzoic acid	5 "
Tannic acid	5 "
Glycerin	125 "
Rose water	200 "

For local use

Sulpho carbolic acid is composed of sulphuric acid 1 part and carbolic acid ½ part, heated over a water bath for a few moments Dissolve the benzoic acid in the glycerin, and the tannic acid in the alcohol —*Gazette de Gynecologie*, Aug 1, 1887

AXILLARY ADENITIS —It is believed by M Grancher that tubercular diseases of the lungs may, through the mediation of the pleura, infect the ganglia of the axilla This peculiarity does not appear hitherto to have attracted much attention, and it is thought that the occurrence of such axillary adenitis may not be rare The knowledge of these facts is regarded as having much importance, not only from a doctrinal point of view, but also from the standpoint of diagnosis, and M Grancher advises that henceforth every case of phthisis should be examined for axillary swellings, and conversely, that every case of axillary adenitis should be examined for the signs of pulmonary mischief —*Lancet*, Oct 29, 1887

CALOMEL FOR HYPODERMATIC USE —SMIRNOFF uses a mixture of 1 part of calomel and 10 parts of glycerin, put in dark glass bottles, with tight glass stoppers, each bottle containing 30 grains of calomel and 5 drachms of glycerin When to be used the bottle is thoroughly shaken, and the syringe introduced through the wide mouth of the bottle —*Therapeutische Monatshefte*, August, 1887

THE
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PUBLISHED WEEKLY

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, NOVEMBER 19, 1887

QUARANTINE DOES NOT DEAL WITH THE MOST DANGEROUS DISEASES

Under this head DR HENRY B BAKER, Secretary of the Michigan State Board of Health, sends us the following paragraphs

"Relative to the persons who brought scarlet fever to Sutton's Bay, Mich , and who came on the S S Ohio, reaching New York September 30, 1887, Dr Wm M Smith, Health Officer of the Port of New York, says

"'Developed cases of diphtheria and scarlatina arriving on vessels at this port are removed to Ward's Island It is impossible under the law for the Health Officer or the authorities at Castle Garden to quarantine persons who have been exposed to the contagion of those diseases, consequently the sick on board vessels during the voyage, doubtless, often infect the relatives or those with whom they come in contact, and who carry the latent contagion to interior communities I would be glad if the law allowed those exposed to the contagion of these diseases to be held for observation, as is the case when persons are exposed to the contagion of small pox'

"The instance mentioned above is an illustration of what Dr Smith says—the child having been exposed during the voyage and taken sick with scarlet fever the day after arrival at New York, so the infected child went on its way, to spread scarlet fever In Michigan at least, ten times as many deaths occur from either scarlet fever or diphtheria as from small pox

"Is it not time that the whole subject of quarantine was investigated by the States, and by the United States Government, with a view to protecting the people of this country from the introduction of the really dangerous diseases?"

To the question presented in the last paragraph, we reply that the subject of quarantine and all that relates to the transmission and communication of contagious and infectious diseases from one place or country to another, does most urgently need further investigation, not, however, simply in the light of present popular theories and etiological assumptions, but by an impartial and thorough study of the whole past history of these two most important classes of disease Such study will readily develop two great fundamental facts, namely, 1 that there are both specific contagions and infections that are capable of being transported from one place to another in connection with goods, clothing, food, water and confined air, and thereby be brought in contact with the people of the country to which they have been transported, and 2 that such contagions and infections can only propagate disease in such localities as contain the pabulum and material conditions for their own culture or reproduction And no system of laws or regulations can be devised and enforced that will effectually protect the people of this or any other country from invasions of contagious and infectious diseases that does not equally recognize both these propositions, and exact as much vigilance in keeping every community free from the pabulum on which pathogenic germs feed, as in intercepting their introduction by quarantine and sanitary cordons Until very recently, the latter has absorbed almost the entire attention of Governments so far as relates to measures for preventing the spread of diseases And yet no system of quarantine alone has ever proved effectual in preventing the spread of any one of the important infectious epidemic diseases Neither is is probable that any quarantine alone ever will do so, simply because the contagious or infectious material may be, and often is, carried under conditions that no quarantine officer or other human being can detect its existence or presence

The case of scarlatina that called forth the paragraphs quoted from Dr Baker illustrates this fact The medical inspector certainly could not know that the scarlatina poison was incubating in the child's blood before any symptoms of its existence had developed, and so might one or more passengers have, unbeknown to themselves, some item of infected goods or clothing in their trunks where it remained dormant during the voyage, and how could it be possible for the most vigilant quarantine officer to detect or even suspect which was the infected article? We are not arguing against all forms of quarantine, but only desirous of checking the present tendency to concentrate popular attention too exclusively upon mere quarantine detentions for safety We think a uniform system of thorough inspection of persons and baggage, quarantine detention for isolation of

the sick, when any are found, and complete cleansing and disinfection of everything contaminated, and the guidance of all well persons to such localities as are most free from the pabulum on which infectious germs may feed, would constitute the best possible safeguard against the introduction of dangerous and infectious diseases from one country into another And the more effectually the attention of the people of any city or country can be concentrated upon the work of securing for themselves at all times a good supply of pure air, wholesome water, and an uncontaminated soil, the more secure they will be from the invasion or spread of any infectious disease

THE HÆMO DYNAMICS OF CEREBRAL HÆMORRHAGE

"Is there any situation," asks MR LEONARD BRADDON, "more hopelessly depressing than the attitude of the physician by the bedside of a severe case of cerebral hæmorrhage? So certain of the diagnosis that he seems to view the fatal clot through the very skull, perfectly acquainted with the antecedent pathology and the actual mode of operation of the silent force that, as it leaks, destroys, he yet stands helplessly by, the author only of trivial directions, utterances pathetically oracular"

In an article in the *Lancet*, of October 15, 1887, Mr Braddon calls attention to certain aspects of cerebral hæmorrhage, which, he believes, afford grounds for the adoption of strong and successful modes of treatment We know that at the post-mortem examination of a fatal case of cerebral hæmorrhage the most striking feature is the comparatively enormous amount of blood poured out into the brain tissue, and the force which it has exerted in tearing up the cerebral mass The pressure exerted, thinks Mr Braddon, is simply a matter of hydro-dynamics A drop of blood, and then another, and others, escape into the brain substance, every beat of the heart increases the quantity of fluid in the hydraulic chamber, and the destroying force of the extravasation He calculates the extravasating force of a hæmorrhage 10 mm in diameter, and a tension in the arteriole of 10 mm, at about 5 atmospheres—more than sufficient to tear the brain tissue apart *outside*, though in the skull the resistance may be greater "In any event it is evident (1) that the destructive effect of an intra-cerebral hæmorrhage is due to the hydraulic force of the leakage, (2) that as the disruptive power increases in hydrostatic ratio, every second of time is of paramount importance in treatment, (3) lastly, that there is a hopeful method of treatment" If these views be correct, then every hæmorrhage into the brain should, it seems, be fatal But Mr Braddon believes it to be only an accident, contingent merely on the matter of rupture, that every hæmorrhage into the brain from an arteriole little smaller than one of the perforating arteries is not invariably fatal "But one can imagine that (1) the sources of the smaller hæmorrhages are capillary vessels, (2) that in the case of miliary aneurisms, the redundancy of tissue, and in other ruptures fragments of tissue, or clot, may act in a valve like manner to prevent further leakage, (3) the tendency to early clotting dependent on general (and perhaps unknown local) conditions is, in cerebral as in any other hæmorrhages, the greatest check and natural safeguard against further bleeding"

Admitting the truth of the theory as to the production of the spreading force of the hæmorrhage, the questions with which we are concerned in treatment are, how to check a beginning, and how to relieve the symptoms of a large established extravasation On this theory, every heart beat is a force of danger, and every one that can be restrained is a step towards success In these cases blood pressure means extravasation, and whatever will lower the one will retard the other, says Mr Braddon The horizontal posture, "if it lower the frequency of the beat, increases the blood-pressure within the cranium, the outflow from which gravity, best brought to bear in an upright attitude, especially assists Cold externally means congestion inside Starvation and cold food mean foregoing the immense advantage of attracting as much blood as possible to the portal system, and so lowering the supply elsewhere Narcotics producing sleep, during which the brain is anæmic, could not be certainly injurious, and although of doubtful utility in the presence of better drugs, in their absence opium ought not to be despised, it lowers the blood-pressure and relieves the brain" The giving of purgatives Mr Braddon regards as an open question We know that Trousseau made his patients sit up, take food, and if possible, exercise More important than all else in the way of medical treatment, says Mr Braddon, is the giving of drugs that lower blood tension, such as nitrite of amyl, the nitrites generally, pilocarpine and other tension reducing drugs, and warmth to the hypogastrium and the hot bath

But the simplest, most potent, the most readily applicable, yet most ignored remedy of all, says the author, lies in surgical procedure We cannot reach the lesion, we must, then cut off the supply of blood by applying pressure to the nearest main

trunk When the seat of hæmorrhage is diagnosticated we should compress the carotid on that side, keeping up the pressure for several hours to give the ruptured vessel time to be occluded by a clot In grave cases, and in those in which the seat of the lesion cannot be diagnosticated, both carotids might be compressed When continuous pressure cannot be applied, he thinks the carotid should be tied, though of course this could completely arrest the bleeding when it comes from a branch of the external carotid About three years ago Mr Braddon tried compression of the carotid, and with success

In the more severe and more frequently fatal cases, in which the patient is comatose when first seen, breathing stertorous and slow, pupils dilated, etc., after compression of the carotid, Mr Braddon recommends trephining for the purpose of at once reducing the intra cerebral pressure This was the effect of trephining in a case reported by Mr Howse to the Clinical Society of London, and in a case reported in the *Lancet*, August 20, 1887 When the disc of bone was removed the symptoms were immediately alleviated In this day of cleanly surgery meningitis is not to be feared, and it cannot be regarded as heroic surgery to trephine, pass a trocar, bistoury or probe into the brain substance to reach the mass of blood Increase of hæmorrhage need not be feared, as we well know the effect of the admission of air to bleeding cavities If in this way the surgeon can tide the patient over the immediate danger, and will keep the wound clean, he need have no fear as to the clot—it will be absorbed

TAMPONING THE UTERUS IN HÆMORRHAGE

FRAIPONT calls attention (*Annales de la Societe medico chirurgicale de Liege*) to the value of tamponment of the uterine cavity by means of iodoform gauze in certain cases of severe uterine hæmorrhage The gauze should be used in large pieces, supple and thin, and may be left in the cavity for one, two or three days, the cavity having been washed out with a carbolic acid or sublimate solution Under its use, says Fraipont, there is no retention of secretions and no decomposition If the gauze be well pushed in it serves as a filter to carry off the secretions, which are considerably diminished, and to deodorize and disinfect them The pieces of gauze act as foreign bodies in the uterus, causing it to contract and arrest hæmorrhage

To permit the introduction of the gauze the cervix must of course be dilated Fraipont has made use of the gauze tampon after operations, such as abrasion of hyperplastic mucosa, excision of pedunculated polypi, or enucleation of encapsulated submucous fibromata, in cases of abortion in which the ovum and membranes were expelled or removed, after pathological or normal labors, when hæmorrhage is due to atony of the uterine muscle After every operation on the interior of the uterus Fraipont washes the uterine cavity with a 2 per cent solution of carbolic acid heated to 42° or 44° C Sometimes this is sufficient to momentarily arrest the hæmorrhage, but this generally returns after a quarter of an hour, when the action of the hot water has passed off But to prevent any hæmorrhage, as soon as the solution returns clear the cavity is stuffed with pieces of iodoform gauze A tampon of oakum or tow, impregnated with borated glycerine, is placed against the cervix The vaginal tampon is omitted Duhrssen, of Berlin, (*Centralblatt für Gynakologie*, No 35, 1887) has also used this tampon in two cases of post partum hæmorrhage in which all other measures failed

For the introduction of the tampon the woman is placed in the obstetrical position, the posterior wall of the vagina is exposed by means of a Sims' or Simon's speculum, and the anterior lip of the cervix is seized with bullet forceps and moderately drawn down Several bands of iodoform gauze, an inch wide and about 30 inches long, are ready at hand, the end of one of them is carried into the cervical cavity with a pair of dressing forceps, and it is then gently pushed into the uterus with a uterine sound The outside end is retained at the cervix, and a second piece is introduced until the uterine cavity is filled If there be need of haste larger and larger pieces of gauze are used It may be necessary to repeat the tamponment after 20 or 36 hours, using a smaller quanty, it may be

TRANSACTIONS OF THE NINTH INTERNATIONAL MEDICAL CONGRESS

Knowing that the Executive Committee of the recent International Medical Congress in Washington had made every possible arrangement for the early and proper publication of the Transactions of that body, we recently sent a note to the Secretary-General, who is also Chairman of the Printing Committee, asking what progress was being made, and promptly received the letter given below By its perusal, our readers will see that the work of eleven of the eighteen Sections and of the General Sessions is completed, and either in the hands of the printer or ready to go there, while the manuscript belonging to Sections 7, 9, part of 10, 12, 14, 17, and 18, has

not yet been returned to the Secretary-General It is to be hoped that the officers of these seven Sections will complete their returns as speedily as possible, that the work of the Printing Committee may not be embarrassed and the early appearance of the volumes of Transactions be deferred

WASHINGTON, D C, NOVEMBER 9, 1887

Dr N S Davis,
President late International Medical Congress,
Chicago, Illinois

Dear Doctor —You ask in regard to progress on the "Transactions," and in reply I have to say that the proceedings of the General Sessions, and of Section 1, are all in type, and the type cast Sections 2, (General Surgery), 3, (Military and Naval Surgery), 4, (Obstetrics), and 5, (Gynæcology), are in the hands of the printer Section 6, (Therapeutics, etc), will go forward to day Section 7, (Anatomy), manuscript not received Section 8, (Physiology), ready to send to printer, as soon as Section 7 is in hand Section 9, (Pathology), manuscript not received Section 10, (Diseases of Children), partly received The part on orthopædics, which was delegated to Dr Judson, by Dr Smith, has not been received Section 11, (Ophthalmology), is in hand and ready for the printer Section 12, (Otology), manuscript not received Section 13, (Laryngology), is on hand Section 14, (Dermatology), manuscript not received Section 15, (Hygiene), and 16, (Climatology and Demography), ready to send Section 17, (Psychological Medicine and Diseases of the Nervous System), and 18, (Dental and Oral Surgery), manuscript not received

In regard to reprints the printers have been instructed to furnish authors reprints on such terms as may be agreed between them, but they will not be furnished until the plates have been used for the printing of the "Transactions " Very truly yours,

JOHN B HAMILTON

CONDITION OF THE CROWN PRINCE —The physicians of the Crown Prince Frederick William declared last Monday that the throat affection was cancerous, and that partial removal of the larynx is not advisable, though the physicians at San Remo recommend complete extirpation, which is objected to by the patient

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF VIRGINIA

Eighteenth Annual Meeting, held in Richmond, October 18, 19, 20 and 21, 1887

(*Concluded from page 631.*)

WEDNESDAY, OCTOBER 19—SECOND DAY

AFTERNOON SESSION

Dr H M Clarkson, of Haymarket, Va, read a report on *Advances in Obstetrics and Diseases of Women and Children*, that have been established in the last year or two

Dr E M Magruder, of Charlottesville, Va, next read the report on *Advances in Chemistry*

DR HERBERT M NASH, of Norfolk, Va, read a paper on

THE IMPORTANCE OF AN EARLY DIAGNOSIS OF OCCIPI TO POSTERIOR POSITIONS, WITH SUGGESTIONS AS TO THEIR MANAGEMENT

He stated that his paper was not intended as a scientific disquisition on the subject discussed, but a paper, in which he did not enter upon a description of the causes or mechanism of these positions, their frequency being now admitted by most obstetricians, but contended that the vertex did not rotate to the symphisis pubis as often as is believed, that the flexion and rotation of the head should be accomplished by art, and not trusted to chance, and that when the vertex is not thus brought to the symphysis, the labor is rendered protracted and severe, an unnecessary draught made upon the endurance of the mother, and in the primipara the labor otherwise may be dangerous, with great probability of a perineal rupture serious in extent

In cases of labor in the first stage, where the pains are lingering and unsatisfactory, with little or no descent of the head, and especially where there has been an early loss of the waters, he always suspects malposition, and usually finds the large fontanelle at the left acetabulum, with the vertex to the right and rear

If the position cannot now be made out with the index finger, he chloroforms his patient and introduces the whole hand into the pelvic cavity, when all doubt is readily dispelled

If the occiput is found to the right and posterior, he uses preferably the left hand, palm to the head of the child, passing the fingers upwards and backwards over the vertex, pulls down the vertex with the bent fingers, while pushing up the forehead with the ball of the hand After flexion is thus secured he counsels a continuance of the traction, during the prevalence of the pain, by the nails hooked over or onto the projection of the parietal bones (of the child) beyond and over the occipital bone

When the fœtal head is found impacted or immovable, he reinforces this maneuvre by the right hand applied to the lower abdominal wall of the mother, and thus raising the whole uterine mass, and rendering the flexion and rotation of the head feasible by the pelvic hand

When this procedure is accomplished the pains, before futile, now become effectual, and the labor proceeds as in ordinary occipito-anterior positions This mode of practice necessitates an early recognition of the position, and the exercise of some exertion and skill on the part of the accoucheur at the outset of the labor, but saves much suffering and frequently the resort to instruments at a later stage He cites a few cases from consultation practice, merely as instructive, and to show how these positions often annoy and confuse intelligent practitioners

THURSDAY, OCTOBER 20—THIRD DAY

The Secretary presented the *Report on Advances in Surgery*, the author, Dr R C Powell, of Alexandria, Va, being prevented from attending by the illness and death of Dr Albert Fairfax, a Fellow of this Society Dr I S Stone, of Lincoln, Va., read a paper on *Uterine Colic*

CASTRATION NOT THE CURE FOR VENEREAL DESIRE

DR I R GODWIN, of Fincastle, Va., read the *Report on Advances in Anatomy and Physiology* In this report he mentions the case of a male inmate of the Southwestern (Va) Lunatic Asylum, on whom castration was performed for cure of masturbation The operation had been performed several years before he was sent to the asylum Marriage had had no curative effect over his habit, and his wife left him in disgust The operation of castration, done at his own earnest solicitation, had been so thoroughly done that not even a vestige of the scrotum was left But as a result of the castration, not only has there not been a cessation of sexual desire, but he is as capable as ever of erections, and is as capable as ever of having sexual intercourse The sexual orgasm is but slightly obtunded, and the act is completed by the ejection of mucus mixed with the secretions from Cowper's and the prostate glands, and the vesiculæ seminales The desire for masturbation still continues, nocturnal emissions have not ceased, and the man threatens and has attempted suicide It would seem from this case that castration does not destroy sexual desire, nor does it cure masturbation, nor does it produce the desired moral impression that we would expect to have in cases of insanity brought about by masturbation

DR WILLIAM A HAMMOND said that in making eunuchs it was the custom to cut out the testicles and all appendages It is not considered safe to leave even a tenth part of the scrotum or any of its contents And yet with this complete ablation there are instances of the continuation of the venereal desire It cannot be denied that the sexual appetite resides in the brain, but in what part he is unable to say It is well known that criminals in being executed by hanging frequently have seminal emissions This effect no one would pretend to say was due to venereal excitement in the usual sense of the term, but it does show that the centre controlling the discharge of the seminal fluid is to be located high up in the nervous system It is further well known that extirpation of the ovaries does not necessarily diminish the sexual appetite in the female, and these organs must be taken as the analogue of the testicles The testicles and ovaries must be considered, so to speak, as intermediate stations along the nervous track for the discharge of venereal impressions that have previously been received Years ago the Missouri law called for castration as the punishment of rape in certain cases, and yet efforts at rape had been committed by persons who had been castrated for this very crime He mentioned several cases that had come to his knowledge in which the sexual desire did not seem to be materially, if at all, decreased by castration

DR ROBERT BATTEY, of Rome, Ga, in response to the call of the Society upon him for remarks on this subject, stated that his experience had included observation of but one case of the effects of castration in the male During the war, when Gen Sherman was making his historic march to the sea, a colored man was arrested in Middle Georgia for rape The confusion of affairs at the time made it impossible to take the usual legal proceedings in the case Hence under a judgment of his neighbors he was castrated But it did not seem to have the intended effect of destroying his propensity for women, for he continued to have intercourse with any woman with whom he could gratify his passion, each intercourse being gratified by the ejaculation of a discharge Of course it was not seminal fluid, for the secreting organ was entirely removed He has known the sexual appetite to continue likewise in the female after the perfect removal of the ovaries and clitoris Early in his experience as an ovariotomist he announced that "Battey's operation" was not a reliable remedy for nymphomania Some women, indeed, say that their sexual appetite has not been affected by the removal of their ovaries, etc In rare cases, in fact, the extirpation of the ovaries seems to have increased the aphrodisiac nature, but this apparent effect may be easily accounted for by the want of pain which accompanied the marital relation prior to the removal of the ovaries He then cited several cases in illustration It seems to him easy to account for this state of things He still adheres to the views expressed on this subject in 1873 before the Georgia Medical Association He compares the ovaries and testicles, in their developing stage, to a school master, who day by day impresses lessons upon the nervous system or centres As the boy or girl loses his or her teacher, the child does not lose thereby what it has learned, but without further education there is no further development It simply *retains* the impressions already made If the woman had developed the venereal appetite prior to the removal of the ovaries, it is more than probable that that desire will remain after the operation, just about as excitable as it was before the operation He does not, however, believe that it has ever been shown that where the ovaries were removed previous to development of the venereal desire, the woman operated on has ever developed as anything of an aphrodisiac There is no case known to him where the ovaries of a girl have been removed who ever afterwards developed fully as a woman, and he doubts if such a case will ever occur in the experience of any one

The following were then elected

OFFICERS FOR THE ENSUING YEAR

President—Dr Benjamin Blackford, of Lynchburg, Va

Vice Presidents—Drs H M Clarkson, of Haymarket, J Grammer, of Halifax C H, and W D Turner, of Fergusson's Wharf

Recording Secretary—Dr Landon B Edwards, of Richmond

Corresponding Secretary—Dr J F Winn, of Richmond

Treasurer—Dr Richard T Styll, of Hollins

Committee on Publications—Drs C W P Brock, George Ross and Hugh M Taylor, all of Richmond.

Chairman Executive Committee—Dr W W Parker, of Richmond

To deliver the Address to the Public and Profession during the Session of 1888—Dr William T Walker, of Lynchburg

Place of Meeting of the Session of 1888, Norfolk, Va , the time to be sometime in November after the 10th

The following was adopted by a large majority, after the failure of numerous efforts to amend the resolutions as offered by Dr Thomas J Moore, of Richmond

WHEREAS, It has been demonstrated that the provision of the law "Regulating the Practice of Medicine and Surgery" in Virginia, allowing applicants for examination for license to practice in this State to appear during the vacations of the Medical Examining Board before three individual examiners, is a defect in the law, and

WHEREAS, The high mission of the Medical Examining Board of Virginia is seriously hindered thereby, *therefore be it*

Resolved, That the Legislative Committee of this Board, together with a Committee to be appointed by this Society, be requested to petition the Legislature to repeal that provision of the law allowing applicants to appear before three individual examiners

The President appointed Drs Wm S Christian, of Middlesex county, E W Rowe, of Orange county, and J E Chancellor, of Albemarle county, as the Committee on the part of the Society

On presentation by Dr C W P Brock, of Richmond, it was

Resolved, That the Committee appointed on the above resolution be also requested to have the law so amended as to require every candidate appearing before the Medical Examining Board of Virginia, to present a properly attested diploma of graduation in medicine from some regularly chartered medical school or college before he can be entitled to examination

DR J E CHANCELLOR, as a matter of privilege, asked that his resolution of yesterday, asking that the Legislative Committee request the Legislature to so change the existing law as to reduce the number of the Medical Examining Board from 32 of the regular profession to 12, and the homœopathic members in like ratio, be now incorporated as a part of the present proceedings Granted by a vote of 81 to 6

On presentation by DR I R GODWIN, of Fincastle, it was

Resolved, That a Committe be appointed by the President to memorialize the Legislature of Virginia in regard to the fees allowed physicians for examinations of lunatics—the fee at present being only that of any ordinary witness

During recess, DR HUNTER MCGUIRE, by appointment, performed the operation of

SUPRA-PUBIC LITHOTOMY

on a young man Consent was obtained to operate in the Senate Chamber—perhaps the first surgical operation ever performed in the Hall—with a gratifying result up to the date of this report

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AFTERNOON SESSION

In the absence of the President and Vice President, Dr W D Turner was called to the Chair

DR A S PRIDDY, of Keysville, Va , read a

REPORT OF A CASE OF PISTOL SHOT WOUND OF THE ABDOMEN, TREATED BY LAPAROTOMY AND SUTURING THE WOUNDED INTESTINE

(See p 649)

DR J R SOWERS, of Warrenton, Va , read a

REPORT OF A CASE OF ABDOMINAL SURGERY FOR INTESTINAL OBSTRUCTION,

which had come under his care Man, aged 68, had protracted and obstinate constipation Painful peristaltic actions of the bowels persisted, with gurgling noises Could not precisely locate the pain No very great distension, no fever—in fact temperature a little below normal During the previous three weeks, he had not passed more than a tablespoonful of fœcal matter from his bowels, but had had frequent stercoracious vomitings until within the past few days Previous health good, except an inguinal hernia for the past twenty years, but there was nothing to indicate that the hernia had anything to do with the present trouble Appetite had failed, purgatives had failed, and enemata and the rectal tube did not tend to open his bowels Dr Shirly Carter (the family physician) and Dr Alex Harris both agreed that laparotomy was necessary Dr Sowers made an incision 5 inches long, in median line below the umbilicus Peritoneum opened on a director Not more than a tablespoonful of blood was lost in the operation Passing hand into the abdomen, after careful search, finally found a hard nodulated mass in the small intestine in the right inguinal region It was a coil of ileum adhered to the cæcum and ascending colon by what felt like a sarcomatous growth Another nodulated mass was found in the transverse colon About a half gallon of fluid was in the peritoneal cavity, which was removed by sponges As the pathological condition precluded any relief by surgical measures, the intestines were carefully returned and the incision brought together Nothing notable occurred until the sixth night when he vomited a large quantity of blood—perhaps a quart—and then grew weaker and weaker until he died on the ninth day

DR L ASHTON, of Falmouth, remarked that all cases of visceral wounds of the abdomen should be thoroughly explored, as hæmorrhages, extravasations of fœcal matter, etc , will surely kill unless promptly treated During the past three years, 38 cases of laparotomies for gunshot wounds of the abdomen have been reported with all recoveries Dr Senn reports several cases where the wounds in the bowels had been closed by his decalcified bone plates, and in from 12 to 18 hours, the wounds were found adherent, and closed by plastic material *In regard to*

Lembert's suture, be careful not to put in too many and do not draw them too tight, so as to intercept vascular supply He would use catgut ligatures in stead of silk But whatever sutures one prefers, be careful not to obstruct venous circulation

Dr George Rohe of Baltimore, by invitation, read a paper on

THE VALUE AND PROPER USE OF ARSENIC IN SKIN DISEASES

He cited experiments to show that arsenic modi fies especially the nutrition of tissues derived from epiplastic layer of the embryo, the skin and nervous system The fact that it produces hyperæmia of the skin renders it inappropriate in most cases of acute inflammation, such as *acute* eczema But in *chronic* eczema, especially its papular and scaly forms, and in the pustular form occurring on the face and scalp of strumous children, combined with iron and cod liver oil it is useful In pemphigus, arsenic acts as a specific It is a sovereign remedy also in psoriasis Of course use the local remedies in addition Arsenic acts as a tonic in syphilitic eruptions, but it is of limited value in acne, most cases of the pustular form being made worse by it As an exception, however, it often acts like magic in menstrual acne in young women In the rare disease in this country, lichen ruber arsenic maintains the reputation given it by the elder Hebra Dr Rohe uses in appropriate cases, two preparations arsenious acid in substance, and the solution of arsenite of potash Arsenic often fails to do good until after some preparatory treat ment To children, he generally gives small doses of calomel every three hours for three or four days Then two or three drop doses of Fowler's solution two or three times daily, increasing the dose by a drop or so daily until its physiological effects are pro duced, soon accomplish all the good that it is capa ble of doing The dose is diminished then accord ing to circumstances He rarely continues the mer curial preparatory treatment in adults more than a couple of days, then he gives the following for ten days, the diuretic action of which seems to prepare the system to derive the fullest benefit from the ar senical course

℞ Potassii acetate ℥j
Ext taraxaci fl ℥j
Aquae, q s fit ℥ij

S Teaspoonful in a tumblerful of water, three times a day, a half hour after meals

When ordering arsenious acid in substance, he pre fers tablet triturates of about $\frac{1}{50}$ grain each, more frequently, $\frac{1}{100}$ grain each He generally precedes a dose to be taken between meals by a glass of milk In this way, he has given a ¼ grain of arsenious acid daily for two months without any unfavorable effect He directs Fowler's solution with sherry wine or cinnamon water, or for children, equal parts of simple syrup and cinnamon water As long ago pointed out by Mr Hunt, the smallest toxic dose of arsenic is fifty times as large as the average medi cinal dose Hence the dangerous poisoning by medicinal doses of arsenic is exceedingly remote, and further, cumulative effects need not be feared, as the drug is rapidly eliminated He sums up, that arsenic, properly used, is a most valuable means of combatting certain skin diseases—most prominently, papular eczema, psoriasis, lichen planus, and pem phigus, that when intelligently used it is not toxic, and is harmless, and that it is rapidly eliminated from the system, and hence cannot act cumulatively as a poison Appropriate local treatment is, of course, to be used in every case

Etiology of Zymotic Diseases, was the title of the next paper, presented by Dr M A Rust, of Rich mond, Va Papers were also read, eliciting more or less discussion, by Dr Wm A Hammond, of New York, on *Coca, and the So called Cocaine Habit*, Dr Charles M Shields, of Richmond, Va, on *Advances in Ophthalmology, Otology and Laryngology*, Dr Jo seph A White, of Richmond, on *Sore Throat and Accompanying Nasal Troubles*, Dr G S Conrad, of Mattly Hill Sanitarium on *Moral Insanity*, and cases of some interest were reported by Drs Wm D Hooper, of Liberty, Va, R B Stover, of Richmond and E M Magruder, of Charlottesville

The social events of the Session, were a compli mentary entertainment at the theatre and a banquet by the Medical College of Virginia, receptions by Drs Hunter McGuire, Joseph A White and Charles M Shields, and a banquet by the Profession of the City of Richmond

PHILADELPHIA COUNTY MEDICAL SOCIETY

Stated Meeting, September 28, 1887

The President, J Solis Cohen, M D, in the Chair

(*Concluded from page 636*)

Dr James Collins read a paper reporting some

PECULIAR SEQUELÆ OF MEASLES

Measles is usually considered a very simple affec tion The respiratory organs and eyes are usually watched This being accomplished, and care that aural catarrh is not developed being exercised, measles is considered as having been properly treated During the recent epidemic I witnessed some sequelæ from measles in which the nervous system seemed to be especially involved

Case 1 —A girl of 8 years The fever, eruption, and desquamation followed the usual course, and not until several days after the skin had resumed its normal color, and the bronchitis had disappeared, did the symptoms of chorea develop This child was a blonde, of Irish parentage The invasion of the nervous symptoms was gradual, but they de veloped to a violent degree During the second week the agitation of the child was so great that she could not remain upon a sofa without being guarded or tied She was unable to feed herself, and was constantly laughing and giggling, as well as twitch ing Cimicifuga, tonics, and applications to the spine were used The child recovered and was well at the sixth week

Case 2 —A girl of 11 years, of German parentage,

a dark blonde, also developed chorea, but in a less violent degree Similar treatment was pursued, and recovery was complete in the fourth week

The marked nervous element in these cases causes them to be worthy of note

Case 3—Kate A, aged 3½ years—the second case of measles in the house Eruption appeared at a normal period, and followed the usual course Catarrhal symptoms not more marked than usual Temperature not above 103°, pulse 110 at highest point

On the third day of the eruption she exhibited a peculiar irregular kick while in bed Examination revealed that the reflexes of the ankle and knee were exaggerated, while the ability to stand was greatly impaired, and the coordination of the movements of the lower extremities was imperfect On the following day she was unable to sit up in bed, the arms kept in irregular motion, while the power of grasp was almost lost for small objects By the fourth day, hearing was impaired, and by the seventh day eyesight was lost, and action of the sphincters became uncertain Blind, deaf, and powerless for self help, this poor child for five weeks kept up an idiotic cry, with irregular swinging and aimless motion of arms and legs The special senses gave some objective evidences of such a grave condition The eye-ground showed the arteries tortuous, veins full, choroid congested, disk seemed to be choked in either eye Dr Lautenbach, who is skilled in the use of the ophthalmoscope, assured me, however, that the condition was that of a swollen disk from active inflammation, and not a true choked disk Membrana tympani of both ears normal From a hyperæsthesia of the reflexes there resulted a condition of impaired sensation, with subnormal temperature, as a rule After five weeks under the use of absorbent alteratives, and counter irritation to spine, the child began to improve, and after twelve weeks commenced to walk and see, hearing was slow to return The reflexes of bladder and rectum also became normal Yet the child continued nervous, irritable, howling with raucous voice when disturbed or denied any of her wishes

During the summer she has gradually improved, now walks with gait somewhat wabbling She eats well, sleeps well, and nourishes well Her temper is irascible, she drags the right foot, and falls easily The motion and use of the upper extremities appear to be normal Hearing nearly normal Eye-ground shows evidences of some structural changes, vessels still small and tortuous, some choroiditis remains Vision has improved so that she can distinguish objects, but my last attempt to test it accurately resulted in ignominious failure

Urine has shown neither albumen nor sugar Specimens examined were of normal specific gravity, and deposited phosphates on standing

The following case presents some peculiar conditions

Case 4—Edward L, aged 9 years, had measles in March, 1886 The attack was severe for four days, and in spite of treatment the recovery was slow He complained of severe headache, and of seeing double at times During the spring and summer he seemed to be tolerably well, excepting headache, from which he suffered frequently In July, 1886, his headaches increased At times his head seemed to be drawn either backward or to one side, the paroxysms lasting four or five minutes, after which he would complain of seeing double On closing the left eye, vision improved, at times vomited his food with glairy mucus The lad improved under treatment Spells of headache became less frequent As he complained of his eyes, examination showed hypermetropia of 1 D right eye, 2 D left eye, with astigmatism in left eye The optic disk of left eye swollen, right less so Glasses given in November improved vision, but headache was still persistent at intervals He got along tolerably well until February, 1887, when headache returned with increasing violence, his gait became unsteady, and double vision increased, becoming almost constant

In April he was taken to a specialist, who added prisms to his glasses, which, for a time, improved his vision In May his headaches became violent again, he suffered from attacks of nausea, his gait became more uncertain, he stiffened his feet in walking, and staggered with uncertain movements, frequently falling, but seemed in good spirits, temperature subnormal Urine pale, passed in large quantities, but neither sugar nor albumen detected Since July the lad has lost flesh, loses his food by vomiting frequently, often the matters vomited are undigested food with glairy mucus, of yellowish tinge Pain in head always present before vomiting, head thrown backward, belches, often has hiccough Temperature subnormal, hands and feet usually cold Generally sleeps well

The condition of his eyes as I have seen them, and confirmed by Dr Isett, who is practised in the use of the ophthalmoscope, show both disks swollen, the arteries small and tortuous, veins large, tortuous, choroid congested Dr Isett adds, "no doubt there is pressure on the brain somewhere" The treatment of this lad has been tonic, alterative, and dietetic The case presents a peculiar outcome from measles

I report these to elicit further reports of such cases, and for the sake of calling attention to the effects of measles on the nervous system, which, in these cases, seems to have suffered severely

DR WILLIAM B ATKINSON said During the last epidemic of measles I saw more cases of inflammation of the lungs than in any previous epidemic within the last thirty-five years Catarrhal sequelæ were extremely common I have not met with the eye troubles, nor have I seen any evidences of brain affections I recall two cases, some fifteen years ago, in which the eyes and the brain were so affected that vision was entirely lost In one case the vision returned after a period of fifteen months, and the child recovered perfectly In the second case, that of a child 18 months of age, the vision was perfectly restored at the end of eight or ten weeks I attribute the restoration of vision, in the first case, largely to the use of phosphorus, which, with intervals of rest, was continued for a year

Dr Wm M Welch said I have never met with the sequelæ referred to by Dr Collins, but I believe that reference is made to them in elaborate text-books Such sequelæ are, I think, more frequent after small pox than after measles I have seen the hearing and speech affected during recovery from small pox, but never from measles The author of the paper referred to subnormal temperature after defervescence took place I have noticed this, and also unusual slowness of the pulse In adults I have frequently found the pulse under 50, when in the recumbent posture

Dr E T Bruen said The question whether or not in these cases, where nervous symptoms have been prominent, there is any lesion of the nervous system, has always been an interesting question to me I recently had the opportunity of making a post mortem examination in a case of typhoid fever where nervous symptoms had been well marked from the second week onward The patient had always been regarded as an hysterical individual There was spasm of the muscles of the back of the neck, with retraction of the head to the right side Also spasm of the right arm, with contraction of the muscles, and the right leg was similarly affected The pupils always responded to light, and there was no paralysis of any muscle The patient died, and in my absence the post mortem examination was made by Dr Musser The only abnormal condition found in the brain was the presence of two cysts, one in each fissure of Sylvius These were about the size of a walnut They contained clear fluid There was no evidence of inflammation or of the presence of hydatids It is a question whether or not these cysts were congenital This case shows that there may be marked nervous symptoms without special lesions, and at the same time may we not imagine that some of these cases of severe nervous symptoms in the course of the specific fevers may occur in consequence of imperfect development of the cerebral substance? The only case in which I can recall symptoms similar to those described by Dr Collins was in a child 4 years of age, and the result of this case was permanent insanity

Dr J H Musser reported some

CASES OF PURPURA HÆMORRHAGICA AND LEUCOCYTHEMIA FROM PRIVATE PRACTICE

Case 1 —Middle aged female, free from the hæmorrhagic diathesis, in her usual health, after an attack of gastro enteritis seized with persistent œsophageal hæmorrhage Diagnosis not determined After five weeks, general purpura Death from retro peritoneal hæmorrhage There was difficulty in making a diagnosis until the external evidences of purpura were seen In fact, a provisional diagnosis alone could be made By the absence of hydrochloric acid in the gastric contents, one might presume carcinoma to be present, and yet collateral evidence could not be found to confirm the suspicion Persistent hæmorrhage, without patent anatomical cause, extending over a period of weeks, may be the forerunner of the general hæmorrhage which characterized purpura hæmorrhagica Indeed, it is possible a single leakage causing death from exhaustion, may be the only expression of this grave disease

It is interesting to speculate on the cause of the ulceration found in the œsophagus Was it present before or subsequent to the gastro enteritis? It doubtless was due to thrombus, which might have lodged while the vomiting was in progress

Deaths from purpura are very rare, with the case just detailed, the following may be of interest The recognition of the nature of the disease was easy

Case 2 —F, male child, aged 5 months, fed on condensed milk Never of robust health Skeleton undoubtedly rickety Family history good Never hæmophilia Irregular, disseminated purpuric spots, on trunk and limbs—first appearing two weeks ago Now universal hæmorrhage, considerable exhumation The subcutaneous hæmorrhages were of two kinds—areas of irregular, tender, deep infiltrations, and round and irregular petechiæ, often with a red centre at first In addition, capillary cutaneous oozings were observed A small spot under the skin would break, and a blot clot form on the surface of the skin Several of the points bled continuously, being restrained only by styptics An autopsy could not be obtained

It is to be regretted that in neither of the cases was an examination of the blood made for the microbes of this affection, described by Cheyne

Case 3 —Man, æt 19 General failure of health, marked by a series of severe attacks of illness Final illness characterized by stupor and coma, low delirium, incontinence of urine and fæces, by dyspnœa and cardiac asthenia, by gastro intestinal disturbance, by fever and sweats

The case was of extreme interest All the organs of the body appeared to be normal Septicæmia from pus in some part of the body could not be determined, because the purulent foci could not be found That the cerebral disturbances were not due to renal or hepatic disease was evident Organic brain disease could certainly not have been coincident, on account of the absence of symptoms indicative of such disorders Malarial and lead toxæmia were excluded for want of evidence Unfortunately, the ophthalmoscope was not used Only very late in the illness was the enlargement of the glands in the axilla observed It was then learned that with each period of poor health these glands would enlarge and grow tender The enlargement was not great, however, and could readily have been overlooked The patient was so ill when the hypertrophy was discovered that, in obedience to the friends' wishes, the blood was not examined The diagnosis of the affection, therefore, was not made, because two most valuable instruments of precision, the ophthalmoscope and hæmocytometer, were not used

Case 4 —Rapid enlargement of the lymphatic glands, the liver, and the spleen, in a young boy Enormous increase of white corpuscles, asthenia and anæmia, herpes and subcutaneous hæmorrhages, pneumonia Duration five weeks Diffused tuberculosis of the lymphatic glands and leucocythæmia, alone, were considered in the study of the case After Fagge, we would consider the age, the absence

of fever and emaciation, the enlargement of the liver, the absence of any caseating gland, the rapid course of the disease—all against the likelihood of tuberculosis

The microscopical examination of the sputum did not go for much, as from the nature of things the boy could not cough or expectorate freely, and hence sputum from the lungs was not obtained The physical signs in the lungs might be due to enlarged bronchial glands, although their hypertrophy is rare in leucocythæmia The lad was so ill we could not insist, after the blood examinations, on using the ophthalmoscope Its use would have been of great service Nevertheless, the diagnosis of leucocythæmia we deem quite correct The occurrence of an unusually large crop of herpes labialis was peculiar and instructive The physical signs in the lungs have been spoken of The herpes, the blood stained mucus expectoration, the fever—which subsided in due time—the extreme dyspnœa, and the occurrence of dulness and bronchial breathing taken together, warrant fully the diagnosis of pneumonia, and, we take it, this inflammatory affection complicated the leucocythæmia

DR W D ROBINSON Some time ago I treated some twenty cases of phthisis by the Bergeon method Three or four of these suffered with purpura The purpuric spots rapidly disappeared while this treatment was continued I then made a search for purpuric cases in the penitentiary, and found fifteen These were placed on the use of gaseous enemata, and the spots rapidly disappeared In three cases there was a slight return on the cessation of the treatment, but when the gas was again employed the spots entirely disappeared During the past three months these cases have remained perfectly well I have also had three cases of leucocythæmia, and these have made more decided improvement under the use of gaseous enemata than with any other form of treatment

DR C D F PHILLIPS, of London, Eng, being invited by the President to take part in the discussion, said The speaker has referred to leucocythæmia I should like in this connection to say a word with reference to the action of quinia on the spleen I have found in a large dog that, after the injection of one, two, or three doses of sulphate of quinia into the jugular vein, there is a marked contraction of the spleen, which may continue for two or three hours The blood-pressure rises invariably during the experiment I have also experimented upon the liver, and I think that we shall be able to prove that quinia also produces contraction of the liver I would make one other remark, although it has no bearing on the case reported Caffein is useful in certain forms of congestive headache, and in order to find an explanation of its action in these cases, I removed a large portion of the cranium and dura mater of a dog, and then injected caffein There was a visible contraction of the vessels of the brain In another dog, prepared in the same way, I applied a solution of the caffein directly to the brain, and the contraction of the vessels was much more distinct I think that the beneficial effect of caffein in cases of congestive headache is accounted for by its effect upon the vessels

DR G E DE SCHWEINITZ As is well known, the orange yellow choroid, the broad, pale, often tortuous retinal veins, and the retinal hæmorrhages present in leukæmic retinitis a remarkable picture Some time ago a young colored man came to the hospital complaining of defective vision, which was reduced one half The ophthalmoscope revealed a widespread retinitis, with hæmorrhages, and on account of yellow spots arranged concentrically around the macula, the presence of albumin in the urine, and high tension in the arteries, this was supposed to be a case of albuminuric retinitis The man disappeared for six months, and when he returned a more careful examination of the eye ground cast doubt upon the original diagnosis Dr Osler, too, when the case was referred to him, speedily made a diagnosis of leucocythæmia, and the blood showed a truly extraordinary increase of the white corpuscles The yellow spots in this case were due to a diapedesis of white corpuscles, and not to fatty degeneration, as they are in albuminic retinitis The combination of renal disease with this disorder may lead to retinal appearances identical with those found in primary kidney trouble, in addition to those manifested by leucocythæmia In this case the albumin was due to the pressure of the enormously enlarged spleen I think that Dr Musser might have derived diagnostic aid from the use of the ophthalmoscope in his first case of purpura, because, had he found the retinal hæmorrhages quite common in this affection, the case would have been sharply separated from the hepatic disorder originally suspected The ophthalmoscope, in the hands of Dr Musser and myself, was recently one of the means of leading to a diagnosis of hepatic coma, previously not clearly made out, which diagnosis I confirmed on the post mortem table by finding an atrophic and cirrhotic liver, which weighed less than two pounds I think there can be no doubt that the use of the ophthalmoscope is often quite as important as that of the thermometer or the stethoscope to the general practitioner

DR J P CROZIER GRIFFITHS The case to which Dr De Schweinitz has referred is still under observation in the hospital The spleen is extremely large, filling the whole left side of the abdomen When he was admitted to the hospital the proportion of white corpuscles to red was as 1 4 A later examination showed the proportion to be 1 25 In one case of purpura hæmorrhagica I have carefully examined the blood without finding any microorganisms Culture experiments were not tried

DR J B WALKER I would ask Dr Musser if, in his first case, he used terebinthinate preparations to check the hæmorrhage? I have found, in cases of purpura hæmorrhagica, and in cases of other hæmorrhages from mucous surfaces, that the terebinthinates are very useful These preparations seem to reach all mucous surfaces I have seen several cases of severe hæmorrhage from the intestinal tract, threatening to be fatal, in which the bleeding was apparently arrested by the use of turpentine, after astringents had failed

Dr S Solis Cohen I have had an experience with a case of typhoid fever which apparently confirms what Dr Walker has said In this case purpuric spots appeared shortly before the occurrence of intestinal hæmorrhage The use of turpentine, after the manner directed by Dr George B Wood, answered an excellent purpose I have seen oil of turpentine, by inhalation and through the mouth, arrest hæmoptysis when ergot had failed

Dr Musser In simple cases of purpura iron has seemed of service In the rheumatic cases salicylate of sodium may be employed Turpentine had been fully tried in the case referred to before I was called When I saw the patient, the stomach was so irritable that very little medicine could be given by the mouth I used the wine of hamamelis, much diluted, and aromatic sulphuric acid, well diluted, but without effect

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Stated Meeting, October 12, 1887

The President, J Solis Cohen, M D, in the Chair

Dr Van Harlingen read

NOTES ON THREE CASES OF LEPROSY

He brought forward the notes of these cases with the purpose of pointing out the peculiarities of leprosy as it presents itself in the earlier and comparatively mild stages of the disease, and with the view of assisting, in some degree, in familiarizing the profession with its most numerous symptoms The matter is one of practical importance, for there is no question, that the disease is on the increase in this country, and before long we may be called upon to decide what course is to be taken for the protection of the community, and, not less important, the care of the unfortunate victims of this disease In addition to the fact that centres of leprosy exist in Canada, in Minnesota, in Louisiana, and in California, several cases have been reported as occurring *de novo* in American soil in persons who have been born in, and have never left the country Under these circumstances it behooves each member of the profession to ascertain and make himself familiar with the appearance of leprosy, so as to be able to recognize it at sight, to make up his mind with regard to the contagious character of the disease, and, finally, setting aside all sentiment and ignorant fear of the malady, to do what can be done for its removal Leprosy is, indeed, contagious in my belief and in that of the majority of observers, but contagious in a slow and uncertain manner Therefore we need have no such fear in approaching it as we should have in coming in contact with syphilis, much less any of the contagious exanthemata

Dr H W Stelwagon I hesitate to express a positive opinion regarding a disease which I have seen so little clinically Various views of the etiology of the disease have been held from time to time, and even at the present time these differences prevail It was formerly charged to dietary and climatic influences, but these, as exclusive factors, have been disproven Another view holds that its spread is due entirely to hereditary transmission, but a study of the affection has excluded this as a main etiological cause Later opinions are that the disease is contagious through inoculation, a view that has much in its favor, but this, also, has been disputed by some writers who have been in position to study the disease One fact, that appears to be against this view is, that in Norway where there are from two to three thousand lepers, the number of cases has been steadily decreasing for the last fifteen or twenty years This decrease is due, it is true, in a measure, to the establishment of lazarettos, but not entirely so, for these contain not more than one-third of the whole number of lepers At the present day, therefore, more or less doubt still exists as to the nature of this disease

Dr W Osler The questions with reference to the contagiousness or inheritance of leprosy are, of course, exceedingly interesting Dr Graham, of Toronto, has made an elaborate study of the disease as it occurs at Tracadie, New Brunswick, and has come to the conclusion that the disease is contagious, and that it is not transmitted by inheritance There, as in Norway, the cases have been progressively diminishing in number Certainly, if contagious, it must be so in a very slight degree It is probably not nearly so contagious as ordinary tuberculosis

Dr A Hewson I have seen something of the anæsthetic form of leprosy, and recently resorted to a plan of treatment which I may say was suggested to me by the lecture of the President of the Society on Bergeon's use of gas, as in the treatment of phthisis I resorted to this expedient in a case in which the bacilli were recognized in the skin I applied the mixture of gases to various parts of the skin, especially the lobes of the ears, by means of inverted funnels, for twenty minutes each day There was a perceptible reduction in the induration in the course of twenty four hours, and at the end of ten or twelve days there was such an improvement that one would hardly have recognized him as the same patient I may say in this connection, that I have been treating cases of keratitis with granular lids by means of these applications of the sulphuretted hydrogen and carbonic acid gases together Within twenty four hours there is such a reduction in the swelling and induration that the lids, which before could not be everted, can be examined without difficulty, and the presence of granular lids as the cause of the keratitis demonstrated The application in all such cases proves acceptable to the patient by its characteristic sensation of gentle warmth to be felt in the part

Dr Van Harlingen It may be said that as the cause of the disease lies in bacillar infection, anything that will kill the bacilli will probably benefit the patient Dr Unna, of Hamburg, from a study of certain cases, has come to the conclusion that a great deal of benefit is to be obtained by the application of certain agents which kill the bacilli How far this method will prove effective I do not know That it will prove effective in the anæsthetic form I very much doubt The reason that a patient has

anæsthetic patches is not that the bacilli are in the skin, but that they are deposited in the nerves which supply these patches

DR WHARTON SINKLER read a paper on

MIGRAINE IN CHILDHOOD

Migraine is more common in children than is gen erally realized Popularly the attacks of "sick headache," which many children have, are attributed to disorder of the stomach from some indiscretion in diet, and many physicians hold the same view The fact that migraine is a disease especially likely to begin about the period of puberty has long been recognized, and this point has been insisted upon by Anstie Many children begin to suffer from characteristic attacks as early as 7 or 8 years of age (Eulenberg speaks of a girl who suffered from excessively severe attacks from her fourth year), and continue to have them until adult life is reached, or, indeed, the attacks may continue all through life Still, it is most often the case that when migraine begins in early childhood, it becomes more severe at puberty and ceases by the time full development is attained

The influence of hereditation is seen to a marked degree in migraine, and the affection often seems to be directly handed down from one generation to the next It is transmitted from parent to child, and may follow either the male or female line, descending from father to son or from mother to daughter The children who suffer from migraine often belong to neurotic families, and it is common to find among the near relatives instances of other nervous disorders It is, then, important for us to be on the lookout for migraine in children who belong to families of nervous tendencies I have now under my care for sick headaches a lad of 14 years, whose mother has violent attacks of neuralgia, and one of his sisters is a well marked example of hysteria It is a well-recognized fact that children who suffer from this disease at and before the time of puberty may, in later life, become the subjects of some of the grave neuroses, such as epilepsy or insanity The great value of the early recognition and cure of the disease is, therefore, apparent

In addition to the influence of heredity, there are many other causes which may induce migraine in children The manner in which a child is brought up has much to do with the production of these attacks Improper food, bad atmosphere, and above all, an insufficient amount of sleep with overtaxing of the brain, all tend to predispose to or directly bring on migraine When a child first begins school he often complains of more or less headache The close air of the school room and too little exercise are enough to account for some of these headaches

In other children, mere mental effort brings on attacks of pain in the head The same thing holds good of migraine that I have observed in chorea, namely, that it is the studious, ambitious children, who stand at or near the head of their classses, who suffer from both of these affections In many instances there are ocular defects, which cause eyestrain, and in these cases the attacks of migraine continue to become more and more frequent in proportion as the eyes are used, until the eye defect is corrected by glasses It is not in all cases, however, that the headaches which follow excessive use of the eyes are due to ocular defect Migraine from eye-strain is not uncommon in children Dr de Schweinitz has kindly furnished me with a case, which is also of interest on account of the superficial optic neuritis which exists

Migraine does not appear to affect one sex more than the other, but if any difference does exist the preponderance is in boys Precocious sexual development in either sex often leads to this form of headache It is astonishing at what an early age evidences of sexual irritation may appear Bad associations and influences lead a child into thoughts and practices that are unwholesome in the extreme and bring about disorders of the whole nervous system Even before puberty the nervous system undergoes a preparatory change, and if there be evil conditions in the surroundings of a child to excite sexual irritation, puberty is hurried forward Under these influences a child becomes hypochondriacal and mopy, complains of various ailments—some of which are real and some fancied—and may suffer from real neuralgias It is very seldom that we meet with migraine in robust and hearty children, but it is seen in those who do not get enough fresh air and who are thin and pale, or in children who think and read too much, and who do not romp and play, but prefer to sit with older people and drink in conversation far beyond their years

The symptoms of migraine in young children are not far different from those in adults The attacks are markedly paroxysmal, occurring from two to six weeks apart, and become more or less frequent, according as the conditions for their development are favorable or otherwise There may be only one or two attacks a year. The attacks may be preceded by premonitory symptoms, such as chilliness, and a feeling of lassitude, and the child is dull, and indisposed to play Sometimes there are subjective ocular symptoms in the form of specks floating before the eyes, muscæ volitantes, or balls of fire, and bright zig zags Occasionally the child complains of hæmiopia These symptoms last a half hour or more, and may be followed by subjective numbness of the tongue, lips, or of the entire half of the body Putnam[1] had a patient in whom in boyhood migraine was represented by repeated attacks of numbness and tingling of the right side of the face, and right half of the body, with aphasia, and hæmianopsia, followed by but trifling headache, or none at all Later in life there were severe attacks of pain Usually as soon as the subjective auras disappear the pain begins At first the pain is dull, and it may be confined to one side of the head, generally, in children, the pain is on both sides of the head, at least they complain of the pain as being general, and it may be either frontal or occipital, most frequently it is frontal Anstie says this is common of all neuralgias of children—*i. e.*, to be frontal and to affect both sides simultaneously

[1] System of American Medicine, vol v, page 1231

There is often nausea throughout the attack, or it may terminate in vomiting, or a free flow of urine, or sometimes there are two or three diarrhœic stools After the crisis is reached the child may fall asleep, and after a nap waken well The attack does not always terminate in a crisis, after a gradually increasing headache for several hours it gradually subsides The face in the beginning of an attack may be pallid, and as the pain increases the face becomes deeply flushed, and the eyes suffused

The treatment must be preventive and curative If a child is of a neurotic family, in which there are already instances of neuralgia and migraine, we should urge the parents to see that he has as wholesome a life as possible Insist on ten hours' sleep a night, and keep him from too prolonged application to his books Six or seven hours of study in the twenty four is enough for a growing child Encourage outdoor sports of all kinds, and, if possible, keep such a child in the country for many months in the year The diet should be abundant and nutritious, milk, eggs, soups, and broths, with meat in moderation, and the various cereals, and plenty of vegetables and fruit Such children can eat largely, and plenty of fatty articles of food is well borne and is of great advantage There is a great tendency, in the education of both girls and boys, to overcramming, and to over stimulation, to reach a high educational standard, but it is encouraging to see the effort which is now being made in our schools to vary and widen the course of study The introduction of manual art into the public schools is of inestimable value to the children, not only because it gives them dexterity and skill in the use of the hands which becomes of practical advantage later in life, but it trains the minds in studies which are, so to speak, external in their kind, As physicians, we cannot too strongly discourage the taking of young children to the theatres, when, not only the late hours and bad air are injurious, but the impressions produced by the plays must be pernicious to an extreme One cannot go to the theatre now without seeing children of all ages looking on at every variety of performance, from the most decolleté spectacular ballet to a melodrama of the highest intensity

If a child has already begun to have attacks of migraine, nothing is of more value than attention to the general health Such children are often pale and thin, and have but little appetite If change of air can be secured, it is often enough to obtain relief from the attacks If we cannot send the patient away, we must resort to tonics and good feeding Cod liver oil, if it can be borne by the stomach, is of the greatest possible use in such cases If the child cannot take oil, we must introduce fat into the system in some other way Cream and plenty of butter may be given Devonshire clotted cream, which is now to be obtained at the Alderney dairies, is relished very much by children

Special anti neuralgia drugs are seldom indicated in these cases, but sometimes the bromides may be given with great advantage, especially in those children who are of a very nervous temperament, and in whom any effort at brain work causes headache It should be given in small doses, and continuously for some weeks

In many cases some ocular defect will be found which will require correction by glasses, and many cases of migraine in children have been cured by this means alone In all cases of migraine we should look carefully into the condition of the teeth, and have any unsound ones filled or removed

DR C M SEITZER said I wish that the author had been more explicit with reference to the dietetic treatment of these cases I infer from his remarks that the majority of his patients have been underfed Most of the cases that I have observed have had an excess of nitrogenous articles, with a lack of sufficient vegetable food I have obtained the best results by limiting the quantity of nitrogenous food, especially in children, and by increasing the quantity of butter, cream, and fatty articles I give light suppers, secure abundant sleep, and moderate exercise, especially in gymnastics Treated in this way, but little medicine is required

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK

(FROM OUR OWN CORRESPONDENT)

Colorado Springs and Davos Platz—Beneficial Effects of Evergreen Forests

At the second October meeting of the New York Academy of Medicine Dr Clinton Wagner, who by special experience is well qualified to speak upon the subject, read a paper devoted to a comparison of Colorado Springs and Davos Platz as winter health resorts The change that had taken place in the opinions of a considerable proportion of the profession since the time, a few years since, when warmth and equability were universally regarded as the essential characteristics of a climate adapted for the treatment of phthisis, was forcibly shown, he said, in the present popularity of these two resorts, at one of which, Davos, there was snow on the ground fully half the year, and at the other, Colorado Springs, there was sometimes a difference of 130° between the temperature in the sun during the day and the night temperature

Having described the most prominent features of the two places, he proceeded to point out the differences between them, the advantage being almost always on the side of the American resort Thus, while at Colorado Springs there was an average of 28 good days in the month, at Davos there were only 20 At Colorado Springs there were 8 hours of sunshine in the day, at Davos 4½ At Colorado Springs the invalid could indulge in riding, driving, tennis, picnics, etc , while at Davos the outdoor diversions were confined to skating and tobogganing, which involved too violent exercise for many patients At Colorado Springs he could enjoy the comforts and advantages of home life, if he preferred, while at Davos he was compelled to stay in a hotel, and it was well known that hotels frequented by

many phthisical patients always partook more or less of the character of hospitals and were depressing in their influence At Colorado Springs the patient could remain throughout the year, but at Davos he was obliged to leave early in the spring, on account of the dampness from the melting snow

At Davos, Dr Wagner went on to say, the hotels were excellent, and there was plenty of amusement Formerly the drainage of the place had been very defective, but within the last few years a most efficient system of drainage (said to be the best in Europe) had been introduced As much could not be said for Colorado Springs, where there was at present no public system of drainage whatever, cesspools and old fashioned privies being still in use The principal hotel, however, was very well drained, and he understood that a complete system for the town was now in contemplation With the natural facilities of the place for good drainage he had no doubt that it could be made very perfect On the whole, he would say that while Davos was unquestionably the best high altitude health resort in Europe, the advantages of Colorado Springs were greatly superior in very many respects

Moreover, there were at Manitou conditions very similar to those at Davos, although it was at an altitude more than a thousand feet greater, and the shortest days for the invalid were six hours in length It was well sheltered from the winds, and also possessed some excellent mineral springs At present, however, it was comparatively deserted in winter

In the discussion which followed the reading of the paper Dr Alfred L Loomis said the climatic treatment of phthisis was deservedly growing more and more in favor From his studies in connection with this subject he had learned to recognize that two things were absolutely essential for a curative effect to be produced, and the first of these was a pure atmosphere, an aseptic atmosphere, if one chose to call it so Pure air could be taken into the lungs on the same principle that antiseptics were displayed in external disease and in surgical cases He did not think it was possible to treat tuberculous cavities with antiseptic solutions, and doubted whether inhalations or other forms of applying antiseptic agencies had any real effect upon the lungs But if we could keep these organs bathed in an aseptic atmosphere we were doing all that was in our power to arrest the disease Under the beneficial influences of such an air the temperature became reduced and distressing nervous symptoms were relieved This element must be sought for in whatever locality was selected for the patient Purity of air was naturally to be expected in high altitudes, but the density of the population and various other circumstances might cause its contamination to a greater or less extent He had no doubt that the air of Colorado Springs and Davos had originally been aseptic, but since they had been crowded with hotels and consumptives he feared that this was no longer the case, and he believed that the benefit of residing at these places places would grow less and less until they would finally be altogether abandoned as health resorts

The second essential for a curative effect was the presence of conditions conducive to outdoor life It was simply folly, he thought, for a phthisical patient to go to any resort and spend twenty hours out of the twenty four shut up in a hotel or boarding house It was much better that he should remain at home, for if he were not well enough to take out door exercise, he was not well enough to be sent to these places This was why those in the first stage of phthisis were so often relieved, and the reason that those with cavities lived was because they went to the health resort in a condition enabling them to spend their time out of doors It was, however, not necessary to go to Colorado to find a pure air, and, besides, he did not believe that high altitude of itself was of the slightest practical importance The great desideratum was purity of atmosphere, but as it was desirable that the patient should be in the sun as much as possible, Colorado Springs was to be preferred to Davos As regards recovery in these places, if the patient did not remain in them for two or three years after all trouble had disappeared, the disease was almost certain to redevelop within a few months This was the great objection to high altitudes for consumptives, and he thought it possible to secure a perfectly pure air at a lower altitude, and that, too, much nearer home

The President, Dr Jacobi, having remarked that no reference had been made to ozone, which was claimed to be an important element in the climatic treatment of phthisis, and was found among mountains and evergreen forests, as well as near and on the sea, Dr Loomis spoke of the beneficial effect of antiseptic emanations, and said that many places which were not naturally aseptic were rendered so by such emanations, especially those from evergreen forests

Dr R P Lincoln said that of late there had been a considerable change in professional opinion as to the advisability of sending patients suffering from laryngeal phthisis to high altitudes, and that Dr Solly, of Colorado Springs, had informed him that he had known three cases of this variety of the disease to recover at that resort

In closing the discussion Dr Wagner stated, in answer to Dr Loomis, that he saw no reason why a patient should not be taken to Colorado Springs even if he were not strong enough to take exercise The journey could now be made with comfort in a comparatively few hours, and when he arrived he could sit or ride out in the open air, an advantage which was not available at Davos

At this meeting of the Academy it was voted to form a separate Section of Diseases of Children, the petition for the formation of such a Section being signed by Drs J Lewis Smith, O'Dwyer, and others interested in pediatrics P B P

THE SUDDEN DEATH OF DR J E CHANDLER

REPLY TO DR H C MARKHAM, OF INDEPENDENCE, IOWA

Dear Sir—The facts reported concerning Dr Chandler's disease are too meagre to warrant a positive expression of opinion as to the cause of his

death There are, however, certain considerations which may serve to throw light upon the abrupt termination of his malady Aside from sunstroke, lightning and other forms of traumatism, the causes of instantaneous dissolution may be put down as hæmorrhage into the medulla and paralysis of the heart or, in other words, arrest of the heart in diastole Bulbar hæmorrhage, sufficient to promptly destroy life, must be so copious as to involve the respiratory or cardiac centres, or both, and such a hæmorrhage is extremely rare in the young, and even in the aged is not common Disease of the blood vessels of the part is for the most part essential to its occurrence, and degenerative weakness of the arterial coats is rare in individuals under 40, except from syphilis or prolonged vascular strain in cases of aortic regurgitation Yet, death from bulbar hæmorrhage is so exceptional, even in cases which present the requisite cardiac and vascular conditions, that, even granting the existence of aortic insufficiency in the case of Dr C, the probabilities would be against his death from extravasation of blood into the medulla

When bulbar embolism is the cause of such hæmorrhage, death is usually preceded by well marked symptoms referrable to a profound centric lesion, and Dr C is reported to have fallen to the floor and died without the utterance of a sound Consequently, our inquiry is limited to that other and not infrequent cause of sudden death, abrupt failure of the heart Here we are at once confronted by two considerations, first, that Dr C was supposed to have mitral regurgitation, secondly, that his disease was not thought to present symptoms of special gravity As to the former, as is well known, the usual cause of death in mitral disease is gradual failure of the right side of the heart, and not sudden diastolic paralysis of the left ventricle This latter occurs when compensatory hypertrophy has yielded to dilatation, commonly in cases of fatty degeneration or over distension of the ventricular walls from the force of the regurgitant blood in aortic incompetence There was no autopsy in the case of Dr C and hence our knowledge as to the exact nature of his heart disease, rests on the report of a mitral systolic murmur If one were inclined to be captious, he might doubt the correctness of this diagnosis, if—as is commonly the case—auscultation had been made with the unaided ear and through a portion of the clothing Under such circumstances, a loud systolic murmur heard throughout the præcordia and preceded by a faint first sound, might be mistaken for a mitral systolic murmur, and the first sound for the second sound Had this been the actual state of affairs, his sudden death after the exertion of pulling a tooth might be readily understood

Granting, however, that his disease was in reality mitral regurgitation, his sudden death is not wholly inexplicable, but it must presuppose greater cardiac feebleness and ventricular dilatation than appear to have been recognized Four weeks prior to his death he complained of symptoms referrable to hepatic engorgement, which, although they yielded to treatment, were followed by debility It is not uncommon for patients with heart disease to refer their symptoms to some other organ than the one mainly affected Furthermore, the Doctor was an energetic man, very likely to perform his daily duties without complaint Hence it is reasonable to assume that his condition was far graver than he himself would admit or others recognize It is probable, therefore, that compensation had been ruptured and grave dilatation established In this condition of the heart the physical exertion of pulling a tooth could, by occasioning sudden increase of the arterial tension through muscular contraction and expiratory increase of the intra bronchial atmospheric pressure, cause a degree of ventricular over distension from which the weakened heart could not recover

Although such a sudden death is rare in mitral disease, it is not unknown I have myself lost a patient, the subject of mitral disease, in this way She sat up in bed to drink a cup of tea and suddenly fell back upon her pillow dead

ROBERT H BABCOCK, M D
70 Monroe St, Room 29, Chicago

OPIUM INEBRIETY AND INFANTILE MORTALITY

Dear Sir —I am desirous of obtaining facts regarding the relation of opium inebriety in mothers to infantile mortality

Dr Frank B Earle, of Chicago, informed me that he "recently attended a woman taking about twelve grains of morphia daily, who has lost four successive babies between the second and fourth day, all having died in collapse" If any reader of your journal will furnish me details of a similar case, I will much appreciate his courtesy and give him full credit

J B MATTISON, M D
314 State St, Brooklyn, N Y

BOOK REVIEWS.

A PRACTICAL TREATISE ON DISEASES OF THE EYE By DR EDOUARD MEYER, Professor à l'École Pratique de la Faculté de Médecine de Paris, Chevalier of the Legion of Honor, etc Translated, with the assistance of the author, from the Third French Edition, with additions as contained in the Fourth German Edition, by FREELAND FERGUS, M B, Ophthalmic Surgeon Glasgow Royal Infirmary, Assistant Surgeon Glasgow Eye Infirmary With 267 illustrations and 3 colored plates 8vo, pp 647 Philadelphia P Blakiston, Son & Co 1887

Dr Meyer's book is so generally recommended and employed in Germany and France that it is considered the student's text book "par excellence" It has gone through several French and German editions, has been translated into Spanish, Polish, Russian, Italian and Japanese languages We are indebted to Dr Fergus for an English translation, which lies before us Its general arrangement does not differ materially from that usually adhered to by text-book writers Every subject is discussed in

a clear and concise manner The work is abreast of the times Its value is enhanced by the truly excel lent wood cuts, which greatly assist in elucidating the text We do not hesitate in prophesying that the hope expressed by the author will be realized, that "the English edition will prove useful, and find favor with English speaking confrères and students on both sides of the Atlantic"

RECTAL AND ANAL SURGERY, with a Description of the Secret Methods of the Itinerants By EDMUND ANDREWS, M D, LL D, Professor of Clinical Surgery Chicago Medical College, Senior Surgeon Mercy Hospital, and E WYLLYS ANDREWS, A M, M D, Adjunct Professor Clinical Surgery Chicago Medical College, Surgeon to Mercy Hospital With original illustrations 8vo, pp 112 Chicago W T Keener 1887

Dr Andrews is so well known to the readers of this journal, by his frequent and most practical communications, that he needs no introduction to them, and little need be said in regard to the volume before us It is eminently practical and clear, is comprehensive and interesting In the preface Dr Andrews gives a history of the itinerant system, or of the "Piles Doctors" of the country The subject matter is considered in the following chapters

"Examination of the Rectum," "Hæmorrhoids," "Fistula in Ano—Abscess and Sinus," "Fissure and Rectal Ulcers," "Prolapse of Rectum," "Polypus and other Benign Growths," "Mechanical Obstructions," "Malignant Tumors," "Malformation and Pruritis Ani," "Mechanical Injuries" The book can be heartily recommended, and especially for its practical character

MISCELLANEOUS.

SHYLOCK IN CHINA —Dr W Morrison, of Shanghai, China, states that he was called upon to attend a young man whose eyes had been punctured because his father was unable to satisfy the claims of a creditor, on making inquiries, he was informed that the punishment was not uncommon in the district, and that deaths occasionally resulted

$250 PRIZE, COMPETITION OPEN TO ALL THE WORLD — The first award under the William F Jenks Prize Fund, of The College of Physicians of Philadelphia, will be made by the Comm ttee, for the best essay upon the "Diagnosis and Treatment of Extra uterine Pregnancy," as soon after January 1, 1889, as may be practicable Papers for competition must be written in English, and be presented by the said date The prize essay is to become the property of the College By order of "The Committee of the William F Jenks Prize,"

ELWOOD WILSON, *Chairman*

1517 Walnut St, Philadelphia, Pa, U S A

THE DEMAND FOR A THREE YEARS' COURSE OF LECTURES and medical study is becoming so great that it can soon be no longer ignored even by schools which are ambitious of the largest possible classes Recently the Executive Committee of the Alumni Association of Jefferson College adopted the following resolution

WHEREAS, It having come to the knowledge of this Executive Committee of the Alumni Association that four students have gone to the University of Pennsylvania to pursue their medical education, at the recommendation of the Alumni of this College on the ground that Jefferson Medical College did not provide a three years' graded course, and did not furnish clinics or instruction on the special branches of medicine and surgery Be it

Resolved, That the Executive Committee, having the best interest of our Alma Mater at heart, respectfully announce these facts to the Faculty, that they may take such action as they deem best to overcome this apparent growing dissatisfaction of our Alumni —*Medical Record*, Nov 12, 1887

NEW BOOKS RECEIVED

Operative Surgery on the Cadaver By Jasper Jewett, Germany New York D Appleton & Co

Functional Nervous Diseases, their Causes and their Treatment Memoir for the concource of 1881–1883, Academie Royale de Medicine de Belgique With Supplement on Anomalies of Refraction and Accommodation of the Eye and Ocular Muscles By G T Stevens New York D Appleton & Co

The Principles of Theoretical Chemistry, with Special Reference to the Condition of Chemical Compounds By Ira Remsen Third Edition, Enlarged and thoroughly Revised Philadelphia Lea Brothers & Co 1887

Transactions of the Association of American Physicians, Second Session, held at Washington, D C, 1887

Natural Law in the Business World By Henry Wood. Boston Lee & Shepard Price 30c

Rectal and Anal Surgery By Edmund Andrews, M D, LL D, and E Wyllys Andrews, A M, M D Chicago W T Keener

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM NOVEMBER 5 1887, TO NOVEMBER 11 1887

Major Chas R Greenleaf, Surgeon, par 8, S O 248, A G O, October 25, 1887, directing Surgeon Greenleaf to visit the recruiting depots and rendezvous at certain places, is amended to include Davenport, Ia., Quincy, Ill, and Evansville, Ind S O 257, A G O, November 4, 1887

Capt Leonard Y Loring, Asst Surgeon, ordered for duty at Ft Morgan, Ariz Ter, upon the expiration of his present sick leave of absence S O 258, A G O, November 5, 1887

Capt Harry O Perley, Asst Surgeon, now on duty at Ft Wayne, Mich, ordered for temporary duty with troops stationed at Highwood, near Chicago, Ill S O 258, A G O, November 5 1887

First Lieut F J Ives, Asst Surgeon, granted leave of absence for one month, to take effect on or about the 15th inst S O 113, Dept Platte, November 5, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING NOVEMBER 12 1887

Surgeon T C Heyl, detached from the "Marion," proceed home and wait orders

P A Surgeon T C Craig, detached from the "Marion," proceed home and wait orders

Medical Inspector H M Wells, detached from the "Trenton," proceed home and wait orders

Medical Director Geo Peck, ordered to Washington, D C, as member of Examining Board

Surgeon Jos G Ayres, ordered to the "Galena," to relieve Surgeon F L DuBois

Surgeon F L DuBois, detached from the "Galena," proceed home and wait orders

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE WEEK ENDING NOVEMBER 12, 1887

Surgeon Walter Wyman, to proceed to Louisville, Ky, and Memphis, Tenn, as inspector November 2, 1887

P A Surgeon F M Urquhart, relieved from duty at Cape Charles Quarantine, ordered to Norfolk, Va November 6, 1887

Asst Surgeon G M Magruder, when relieved, to rejoin station at Chicago, Ill November 3, 1887

THE

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ADDRESSES

SECTION OF LARYNGOLOGY, NINTH INTERNATIONAL MEDICAL CONGRESS

INAUGURAL ADDRESS OF THE PRESIDENT,

W H DALY, M D,

OF PITTSBURG PA

GENTLEMEN —It is gratifying to see so many of my American confrères here to redeem the pledge made for them at Copenhagen, Denmark, in 1884, that an American welcome should be given the International Medical Congress at this, its ninth, meeting It is also a source of highest pleasure to meet those present from foreign lands, many of whose familiar names in the growing literature of Laryngology remind us that we are not altogether new acquaintances With many of us our memories revert at this time, with renewed freshness and pleasure, to our last meeting in the Capital City of the Kingdom of Denmark, the home not only of the sturdy Norseman, but of the most accomplished medical scholars, where both King and Nation gave up their country to the good of the Congress during its meetings, and where every one, from ruler to peasant, united in showing their Nation's guests what the full meaning of the Norseman's hospitality was, so quiet, so restful, so complete that it comes back to us at the end of three years as though it was a quiet happy dream of ours in a Norseman fairy land

We scarcely hope that it is possible for us to be so successful, but if we can secure a degree of the happiness and profit realized by all of us in Denmark, in 1884, then I think we shall have been successful

To one and all, however, not only to personal friends from across the seas, whose familiar faces I see before me, and to whom I am indebted for early and valuable training in laryngology, but to all, I bid a heartfelt greeting and cordial welcome And though we may not attain the perfection of the great meeting at Copenhagen in 1884, yet I beg all of you to feel that the broad bosom of this beautiful land is happy in being your resting place, and its people feel the high honor that is accorded them in being permitted to entertain the worthy representative medical men from foreign nations We sincerely trust that none of you will leave this, our Nation's Capital, without inspecting its resident localities, as well as its public buildings The National Museum, the Museum of the Army, the Smithsonian, and other institutions None of these collections suffer by comparison with the famous collections of the old world In fact, Washington City is, by these institutions, placed in the front rank as a repository of scientific learning

We ought to congratulate ourselves as laryngologists, in this our second meeting as an independent Section of the International Medical Congress, and endeavor to have the work of this branch of medicine placed in every large medical body as an independent Section, as the importance and growing excellence of its literature and valuable practical work deserves

When one looks back to the state of laryngology in 1876, and makes a comparison with the present status of it, it becomes a matter not only of the utmost interest, but of satisfaction and pride to those who have been engaged in its study and advancement, to note what alone its cognate branch, rhinology, has done for the successful and rational treatment of hay fever, which, before the appearance of a paper which I read before the American Laryngological Association in 1881, calling the attention of the profession to some observations I made during a few previous years, upon the local predisposing intranasal causes of this disease, the sufferers therefrom had spent a rambling sort of life in seeking immunity from what they can now, in a large percentage of cases, easily get cured, permanently and surely, at home, by a proper rational treatment

I desire to say, however, that the lamented Hack, and some other able writers in the same field, claimed more for the plan of treatment I then advised than I ever did, as I then, in 1880, assumed to postulate I still find it, after seven years, strongly tenable, viz "Whether we are warranted in believing any case of hay asthma purely a neurosis, without first eliminating the possible causation due to local structural or functional disease in the naso pharynx" Therein clearly admitting that a proportion of cases were of the character of neuroses, but a far greater proportion still depended on a chronic intra nasal disease, upon which the exciting cause, viz, pollen, and other agents, act with effect, and second, without this intrinsic nasal disease the exciting cause is innocuous

I am firmly of the belief that the workers in our special branch will yet make the local treatment so complete that we will cure still a larger percentage, even to all the cases of hay asthma that present themselves This is a hopeful and zealous view of

the future of hay fever, but I nevertheless expect to see this realized

There are few laryngologists but have constant opportunity of observing the rapid development and growth of puny children, after having been under the treatment of the throat specialist, and their noses and throats put in proper order, so that the filthy catarrhal discharges are no longer swallowed, and the upper air passages are opened up so that during sleep they can get a plentiful supply of air, hence physical thrift and comfort quickly change the weakly constitution to a strong one

I think no working laryngologist can fail to note the growing importance of rhinology, and I am free to say the opinion I expressed in a paper before the Eighth International Medical Congress, at Copenhagen, viz, "That the Laryngologist of the future must be more the Rhinologist, and the Rhinologist more the Surgeon than the Physician," has been fully borne out by the evidence afforded by our literature alone

There can be no question that a large proportion of the inflammatory diseases of the larynx are secondary to an initial disease of the intra nasal cavities of a like inflammatory character This I have repeatedly verified by years of observation, and frequently publicly so stated in our deliberations, and I am pleased to say that the number of my colleagues who have since also verified this to their own satisfaction is an ever increasing one, the number containing, as it does, some of the most successful and distinguished practitioners in this special branch of medicine Of the aid modern rhinology has been in our successful prevention and treatment of internal and middle ear diseases alone is scarcely calculable The fact is apparent that no aurist can be accomplished in his special work who ignores the facilities afforded him by a careful study of the concomitant and too often initial disease of the intranasal cavities

But, gentlemen, time passes, and I must not further dilate upon the advancement of our important specialty and its cognate branches, but the bright minds who are now devotees of its service, and future workers, will place it higher and higher, till it reaches its zenith of excellence and usefulness to humanity

As you observe by the printed programme, there are an abundance of papers from able writers from many lands, upon most attractive subjects, and the valuable time of the Section must not be taken up either by your President or any one else to the exclusion of others, I will therefore set the example of brevity by making my address short I feel I have your kind wishes and that you will aid me in expediting the work of the Section from day to day, adhering ourselves strictly to the time permitted to each member under the rules, viz, twenty minutes for the reading of a paper, and ten minutes for each speaker engaging in the discussion thereof, I shall hope that each member will be promptly here at the hour to which we adjourn, so that we can begin our work and continue it without undue haste as the session advances

But, friends, we are solemnly reminded in these living moments, as we enjoy our happy greetings of old friends and new, "from lands of sun to lands of snow," that there too is an increasing number of the goodly names of our honored dead, who worked and won fame in the fields we now cultivate, while they are personally the silent members of this, our Ninth International Medical Congress, yet through every one of you their names and voices and words of wisdom will be heard as you speak at this, for the time being, the World's Medical Forum, to your absent colleagues in every land and clime Their names are on the lips of every student of laryngology, and their words will always stand a part of its growing and valuable literature, and while their fame is our pride, let it also be our aim to emulate the higher traits of character and the ability that won for our Elsburg, Krishaber, Foulis, Bruns, Waldenberg, Buro, Bocker, and Hack, the distinction that made their teachings as beacon lights to guide their less gifted brethren in the fields of laryngological science Oh, honored dead! we in spirit strew flowers on your tombs, and join hand in hand while we bless the memory of your worthy lives, and mourn the events of your too untimely deaths A part of this number were young men, cut off in the growing beauty and strength of manhood, with all the zeal and enthusiasm of their scientific labors still fresh upon them May the earth rest lightly over them in the respective lands where their devoted bodies lie The lamented, the honored dead of our ranks

ORIGINAL ARTICLES.

OBSERVATIONS ON DISPLACEMENT OF THE CRYSTALLINE LENS FROM CONGENITAL AND OTHER CAUSES

Read in Section on Ophthalmology and Otology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY J L THOMPSON, M D,
OF INDIANAPOLIS IND

Case 1—A L B, æt 17 years, consulted me for glasses some years ago, when it was found that he had displacement of each lens toward the temporal side, with tremulousness of the inner half of the iris A mydriatic was used, after which the inner edge of the lens was to be seen a little to the nasal side of a line dropped vertically through the centre of the pupil With the ophthalmoscope the optic discs seemed to be double, one through the edge of the lens and one in the aphakic portion, which, of course, was due to the prismatic effect of the periphery of the lens Vision in each eye = $\frac{20}{cc}$, with — 6 00 D sph It was evident, though, that the aphakic or inner portion of the eye was hyperopic He was seen four years afterwards, when no change was found in structure, refraction, or acuity of vision

Case 2—W R H, æt 35 (accidentally found to be a cousin of the above), called upon me on December 10, 1884, on account of a terrible neuralgic

pain in the left eye of three weeks' duration It was very much congested, the tension + 2, V = simple perception of light, and the lens was dislocated into the anterior chamber The membrane of Descemmet was partially opaque and striated from contact with the lens, and the iris was dilated and discolored

The condition of the right eye was as follows Lens displaced outwards, just as in case No 1, iridodonesis of the inner portion, and the lens bounded and rebounded outward and backward on the least motion of the eye, settling to the position described above when the organ was at rest The lens of the left eye was replaced after the following method The patient was placed upon a hard lounge, his head was violently shaken, lifted up and thrust backward, several times, but to no effect, pressure was then made upon the cornea with a vulcanite spoon, and by manipulation also through the medium of the lower lid, when, after repeated efforts, reduction was accomplished Eserine was freely used, a pressure bandage applied, and he went to his hotel for the night On the following morning the lens was seen to be behind the iris, which was still widely dilated, tension only slightly above normal He was given a solution of eserine and sent home for a week December 18, pupil still widely dilated, paralyzed, lens behind the iris, and as movable as in the other eye, membrane of Descemmet not so hazy as before V = $\frac{6}{60}$, with — 18 00 D sph In the right eye it = $\frac{10}{60}$, with the same lens He was cautioned about stooping, straining, sneezing, etc, and sent home

On December 28, 1885, one year from the date on which he was first examined, the lens of the other (right) eye became dislocated into the anterior chamber, causing the same atrocious pain which he had experienced before It was reduced by the same methods resorted to in the left Eserine quickly contracted the pupil The iris of the other eye was still paralyzed

On August 21, 1886, the lens of the first affected (left) eye had fallen below the centre of the pupil, and his myopia of 18 00 dioptries had changed to a hyperopia of 10 00 D Three months later the lens of the second (right) eye fell from its moorings, when he required + 10 00 D sph for distant and + 18 00 D sph for close vision

Case 3—C F H, æt 24, a brother of the above, desired me to examine him for glasses in December, 1885 He had a tremulousness of the lower middle portion of each iris, with a tilting backward of the corresponding part of the lens The optic discs looked very small and slightly elliptical Right V = $\frac{20}{XX}$, with — 8 00 D sph Left V = $\frac{20}{XX}$, with — 5 50 D sph ◯ — 2 25 D, cyl axis (unusual) 90° Inquiry as to the parentage and ancestry of these patients failed to show any intermarriage of blood relations A grandmother and an aunt were said to be very near as well as poor sighted

Case 4—E C, æt 31 years, was examined in February, 1884 Right eye staphylomatous, lens in lower part of ant chamber and calcareous T + 3 V = 0 Has suffered terrible paroxysms of pain in it for many months Left eye quite painful during the last few weeks, lens in ant chamber and adherent below to the posterior elastic lamina The upper part of the lens is tilted backwards, with the corresponding portion of the iris V = $\frac{20}{?}$, with — 6 00 sph He says that he has always been near sighted, and that a competent eye specialist told him years ago that his lenses were dislocated, that until a short time ago they would float about and come forward, but he could always replace them by a sudden movement of the head backwards I advised enucleation of the right eye, and did it under the influence of an anæsthetic While under the chloroform an effort was made to replace the left lens, but it was found to be too adherent to both iris and cornea for anything to be accomplished short of unjustifiable interference I therefore suffered him to return home, with orders to report again on the least change, expecting that sooner or later an iridectomy might be needed He was not seen again until one year afterwards, when I found the lens very much shrunken, opaque, and still adherent to the iris and cornea Doubtless the efforts at reduction had caused this change V = $\frac{20}{?}$, with + 10 00 D sph The eye free from pain

Cases 5 and 6 were simple, congenital displacements directly outwards, in young persons, with iridodonesis, myopia, and reduced acuity of vision

Cases 7 and 8—These, in addition to the above-named symptoms, had corectopia In both the pupils were exceedingly small, and were situated upward and outward One of them had nystagmus also

In none of these cases did the lens seem to be smaller than usual, and though I looked carefully for evidence of abnormal suspensory ligament, neither oblique illumination nor the ophthalmoscope enabled me to see any of its folds

Spontaneous Luxations of the Lens—These have been too numerous to record short of wearying you I will therefore simply mention a few points concerning them The largest number have occurred in cataractous patients who were past the meridian of life, though I have seen it by no means infrequently in youthful persons Some of these have been seen almost from the very point of departure, and on through all of the various changes to the end The following may be considered typical ones

Case 9—A C, æt 74, of full habit, right eye lost from corneal opacity following ulceration and treatment with ground glass when a youth Left lens slightly opaque I saw this patient from time to time for several years during the progress of ripening of the cataract, until he became very impatient, and anxious to have something done I then told him that if on his next visit to me, six months hence, it was not ready, I would hasten it by an iridectomy When he returned, a slight luxation with iridodonesis was to be seen I refused to operate until further changes were manifest He left me much disappointed and went to another, had his lens extracted and as I learned subsequently, lost much vitreous and became totally blind

Case 10—A feeble gentleman, æt 76, had senile cataract in both eyes The left lens was slightly

luxated downward, so that by artificial mydriasis he could see a little above the periphery of the lens I made a small iridectomy upwards, which was followed by a slight escape of vitreous, but it gave rise to no immediate trouble He recovered nicely, could see to read very small type with + 16 00 D spl , but, in about three months after the operation, the lens settled still lower, pressing upon the ciliary body, and he suffered most terribly until his death, which was supposed to be from softening of the brain His vision, however, remained remarkably good until the end

Case 11 —W W , æt 44, was seen in 1876 with matured cortical cataract in the left eye, which had been blind several years He never had injured it, there was no tremulousness of the iris, V = simple perception of light Right eye normal, V = $\frac{2}{x}\frac{2}{x}$ In 1882 a little opacity was to be seen in the right In 1884 a slight shaking of the iris could be noticed in the left The right gradually went on to blindness, but I refused to extract until he had abstained from liquor for three months (he was a steady drinker) An extraction was made with great ease, and he did well until the fifth day, when a hæmorrhage from the iris took place, followed by a very high degree of inflammation which closed the pupil An artificial one was made twice subsequently, and these also closed We finally succeeded in obtaining V = $\frac{3}{c}c$ He became anxious to have the left lens removed, but I made a downward iridectomy first, hoping that something might turn up before attempting to extract A small amount of vitreous escaped as the knife was withdrawn, but he did well for four days, when a hæmorrhage took place After all the blood had disappeared, a most beautiful keyhole-shaped pupil was to be seen, at the lower part of which a narrow, jet-black portion showed that a space existed between the lens periphery and lower corneal margin The lens trembled very much on the least motion of the globe This opening enabled him to walk about in moderately familiar places, in deed, all about our city, but not enough to satisfy his desires, so that I was constantly entreated to do something more I really feared to touch it, as it was practically the only eye he had, and in the light of my former experience with him, I expected its loss to follow an extraction He then visited many others of our profession, but fortunately they did nothing Over and over again did he visit me, and there hung the shaking lens, which almost tempted me to loosen its attachments, when, about nine months ago, he called upon me suffering the most excruciating pain in it, the cause of which I was at a loss to account for He was given a little cocaine and atropia, with orders to report again in a few days I saw nothing further of him for one month, when he presented himself with a beaming countenance and an almost clear lens, it having become liquefied Only a few minute specks were to be seen floating in its substance, and a few striæ hanging from its posterior border into the vitreous humor His vision = $\frac{2}{c}0$, with + 11 00 D sph , and has remained as good until the present date, when I see him every day riding or driving about our city

Case 12 —*Traumatic Luxation of the Lens* —Patrick D , æt 55, dislocated his lens into the anterior chamber by striking it with a "spaul" of stone while cutting rock in Ireland, thirty years before I saw him He says that his eye pained him terribly after the accident and he became blind He again struck his eye in the same way and manner and again suffered fearfully I found him, three weeks after the accident, with an iritis, an opaque lens in the anterior chamber, and tension + 2 His lens was removed and an iridectomy made, when, after four weeks, his vision became remarkably good, = $\frac{2}{c}0$, remaining so up to the present time, seven years after the operation

Case 13 is a striking contrast to the above H A , æt 59, was kicked by a horse a few years ago, which caused atrophy of the right eye The left is hard as a marble, the pupil widely dilated, the lens clear and floating about in the vitreous as in so much water The optic disc is atrophied and the central vessels curve abruptly over its edge Vision is totally obliterated And so one could go on with case after case showing the most opposite results from similar causes, were it not that you would accuse him of prolixity I will therefore briefly remark on the above report as follows

The three cases first mentioned corroborate the writings of others, as to the influence of heredity in congenital displacement of the lens

Cases 2 and 4 lead one to the conclusion that an eye with a congenitally displaced lens is an exceedingly weak organ, and very prone to progressive luxation, to cataract and to glaucoma

All of these cases were myopic, the myopia being due to lens anomalies and not to elongation of the eyeballs, as was proved both by the ophthalmoscope and by positive glasses, in the cases where the lens fell below the axis of vision

The permanent paralysis of the iris in case 2, after contact with the dislocated lens for so short a time, seems to be a point worth our consideration

I would also beg leave to call attention to the methods employed in replacing the lens in this case, and would suggest that, should one fail by all of these, he would be justified in evacuating the aqueous chamber by a free incision through the cornea, as every beginner knows that when he first attempted to extract a transparent, recently dislocated lens from the anterior chamber, no sooner was the incision made through the cornea than the lens bounded behind the iris, to his great mortification

The most fruitful cause of spontaneous luxation of the lens is, as far as my experience has permitted me to judge, subacute inflammation of the uveal tract Often have I seen it take place during the course of that many-named disease, "aquo capsulitis, keratitis punctata," etc I further believe that it is often the cause of the acquired myopia ("second sight") of elderly persons Not unfrequently, one meets with such patients whom he finds to be hyperopic, and who require strong positive lenses, even for infinite distance Again do they call, stating that their glasses serve them no longer, and we find that they can read better without than with convexes,

and see better with negatives at a distance than without, but when we look into their eyes we often find the iris and lens much closer to the cornea than before, and generally a congested condition of the fundus, with floating particles in the vitreous humor

Case 10 shows that the spontaneous cure of cataract is by no means impossible, that it cannot always be accounted for on the theory of a falling of the lens below the upper margin of the pupil, nor by that of traumatism and subsequent absorption, but that it does, in a small number of cases, first become loosened from its ciliary attachments, disintegrate, liquefy and regain transparency

In luxations of the lens from traumatic causes, such peculiar and marvelous results are so often met with that, were a book written on this subject alone, it would take rank with the writings of De Foe and other similar authors, and the writer of it would be considered about as truthful as was Herodotus prior to the excavations about Nineveh and Babylon

Resume

1 Heredity plays an important part in congenital displacement of the lens

2 Congenital displacement is a dangerous anomaly which is very prone to progressive luxation, to cataract and glaucoma

3 Most of the cases of congenital displacement are highly myopic, and the myopia is due to the malposition of the lens, and not to elongation of the antero posterior axis of the globe

4 Spontaneous luxation is in a very large proportion of cases due to congestion and subacute inflammation of the uveal tract, and the "second sight" or acquired myopia of elderly persons is often due to this cause

5 Partial spontaneous luxation of the lens occasionally results in the spontaneous cure of cataract, not, as is usually supposed, by the falling of the lens below the upper pupillary margin, but by degenerative metamorphosis and subsequent liquefaction

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INJURIES OF THE FŒTUS DURING LABOR

Read before the Philadelphia County Medical Society, October 26, 1887

BY THEOPHILUS PARVIN, M D, LL D,

PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN IN THE JEFFERSON MEDICAL COLLEGE PHILADELPHIA

Though injuries of the child during labor are not frequent, probably they are much less rare than commonly believed In many instances they are recognized immediately after delivery, and they may spontaneously disappear, and in some their consequences are attributed to erroneous causes

Some of these lesions may happen in spontaneous labor, and others in artificial, whether the interference be manual or instrumental It is impossible to classify them according to their causes, and apparently the most satisfactory division is one resting upon the regions or parts affected Hence, in the paper now presented, injuries to the fœtus in labor will be divided into those involving the head and neck, those of the trunk, and finally, those of the extremities

Injuries of the Head and Neck —Contused wounds of the scalp and of the face, and incised, punctured, and lacerated wounds of the former are met with So far as contused wounds of the face are concerned, it usually happens that they follow difficult delivery with the forceps, especially if the instrument be a powerful compressor, so too these result if the blades are applied obliquely, or antero posteriorly to the head instead of to its sides But in most all cases the effects are trivial and soon disappear Punctured and incised wounds of the scalp have been made by the obstetrician mistaking a caput succedaneum for the fœtal sac Farmer mentions an instance of a wound thus inflicted leading to the death of the child from erysipelas a few days after birth More extraordinary is a lacerated wound of the scalp made in the effort to apply forceps, the operator introducing one of the blades between the scalp and the cranial bones An example of this terrible blunder is mentioned by Charpentier, and I have met with a similar case

Sloughing of a portion of the fœtal scalp has been observed following some cases of spontaneous labor Thus, Priestley[1] has reported a case of this kind, resulting in death eight days after delivery, the labor was protracted for forty eight hours because of a narrowed pelvic outlet Lizé[2] of Mans, states that in the case of a multipara, 30 years of age, the waters ruptured five days before the birth of her child which presented by the vertex, but occupied an occipito sacral position Five days after delivery, a slough involving almost the entire extent of the occipital bone appeared, three days subsequently it became detached and the child recovered

Bouchut[3] quotes from Lorain a case of gangrene of the scalp in a newborn child occurring in the service of Moreau at the Maternity The mother was a primipara, and the labor lasted forty eight hours, terminating spontaneously, the child died on the nineteenth day

Dr Goodell informs me of a case in which an oblique application of the forceps was made—one blade being in relation with the right frontal bone, and the other with the left occipital—and the right anterior portion of the head was so bruised that sloughing occurred a few days subsequent to birth, after the detachment of the slough a fatal hæmorrhage occurred

Depressions and fractures of the cranial bones, separation of their union to each other, fractures of the bones of the face, as well as disjunction of their articulations and joints, have been observed more or less frequently in cases of difficult labor, manual or instrumental—some of them, indeed, in spontaneous labor

In regard to depressions of the bones of the fœtal skull, some obstetricians have asserted that they are always accompanied by fractures That was the opinion of Danyau, of Lachapelle, and of Schroder

[1] London Obstetrical Society s Transactions vol i
[2] Annales de Gynécologie 1875
[3] Traité Pratique des Maladies des Nouveau Nes etc

But the following case,[4] given by Matthews Duncan, seems to strengthen the view held by most obstetricians, that such depressions may occur without the bone involved being broken The case was one in which persistent digital impression was produced on the right parietal bone of a fœtus during birth, by the finger of the accoucheur, who was endeavoring to cause rotation The result was slight, short, but frequently repeated epileptiform seizures, which lasted some time after the digital impression had disappeared, and were finally replaced by choreic movements Now it seems hardly probable that the pressure of the finger produced a fracture of the bone

Dugès[5] has given an instance of great depression in one of the parietal bones, not followed by any serious consequences The child was delivered by the feet through a pelvis of which the conjugate was estimated at three inches and a quarter Powerful traction upon the shoulders and upon the lower jaw was necessary to bring the head past the obstruction, and the parietal bone, which was in relation with the sacro vertebral angle, presented a depression half an inch in depth and two inches in breadth The infant was resuscitated with difficulty, then had convulsions, but in a few days was quite well, and in fifteen days the depression had entirely disappeared

Minor depressions or identations are sometimes seen, especially after the application of the forceps, and in rare instances such marks are permanent But we must not be in haste to conclude that these indentations found upon the head of a newborn child are proofs of instrumental delivery, for Osiander[6] has stated that, having delivered a child by podalic version through a narrowed pelvis, he found upon its head a depression into which the end of a forceps-blade accurately fitted, so that he himself would have concluded, had he ever a similar depression, that the delivery had not been spontaneous, but by the forceps

Fractures of the fœtal skull have been observed as the result of direct violence, as when a woman expels her child while she is standing, and it falls on the floor Or, again, a woman,[7] near the close of the second stage of labor, the child's head being at the vulvar opening, threw herself out of the window, and several fractures of her limbs, as well as a fracture of the child's head resulted

But apart from these cases in which the injury has resulted from direct violence, and those observed in delivery, whether spontaneous, manual, or instrumental, in narrowed pelvis, which will be referred to in a moment, fracture may occur when the labor is in all respects perfectly normal, so far as duration and facility are concerned Thus, Dr Charles West[8] has reported the case of an infant dying from convulsions nine days after birth, the labor having been an easy one and lasting but five hours, the mother had previously given birth to two living children, and these labors too had been normal Yet upon an autopsy of the third child, a fracture of the right parietal bone, with effusion of blood between the cranium and dura mater, the effusion being more than half an inch thick and occupying the entire fossa of the bone, was discovered He states in his report that fractures of the skull have been known to take place during easy labors, and wholly independent of any preternatural degree of ossification of the skull Monteith[9] mentions having attended a case of perfectly natural labor, yet the child had a fracture of the right parietal bone, there was a marked depression in the middle of the bone, and the fracture extended to the sagittal suture on one side, and to the coronal on the other

It is quite apparent that a case such as either of these might give rise to a medico-legal investigation, or to unjust censure of the obstetrician

Coming now to fractures of the bones of the cranium or face, or rupture of joints involving the maxillary symphysis, or the cervical vertebræ, or fracture of a verterbra, for it is claimed that usually the body of one is broken rather than a separation between two vertebræ, as the consequence of great traction occurring in manual or in instrumental delivery, an important question arises as to the amount of force that may be safely used either with hand or instrument In illustration of the great force which has been employed in forceps delivery without injury to mother or child, I quote the following from Dr Peugnet[10] He states

"I was called to Mrs K , a multipara, in labor with her third child The first two were delivered by craniotomy The vertex presenting, R O A , and impacted between the sacrum and the pubes, the conjugate diameter of the superior strait greatly contracted, I applied forceps, and had great difficulty in locking them Dreading the laceration which might ensue in this case from side to side lever action, I concluded to rely upon direct and steady traction My strength giving way, her husband held me round the waist, while the patient was held *in situ* on the dorsum by four women In forty five minutes I had the satisfaction of bringing the head down upon the perineum The delivery was then speedily accomplished Both mother and child, a girl, did well"

The least that can be said in regard to this case is, that the result was very remarkable, and it is doubtful whether the practice pursued could be repeated in any considerable series of similar cases without injury to both mother and child

Delore,[11] after remarking that the fœtal head may endure without injury, a great compressing force if applied to a large surface, and if made by a regularly concave surface, as that of the blades of the forceps, states that from his experiments he found a compressing force of one hundred kilogrammes did not cause a fracture But, on the other hand, if the blades slip, if the pressure is made upon a small surface, fracture follows the exercise of much less force Further, a blunt, angular body, such as the sacro vertebral angle, the spherical surface of which is described by a radius of two or three centimetres, produces a fracture with a force of twenty kilogrammes As the

[4] British Medical Journal, October 18 1873
[5] Quoted by Jacquemier Manual des Accouchements Paris 1846
[6] Given by Cieslewicz Verletzungen des Fœtus durch den Geburt shelfer Halle, 1870 Cieslewicz gives forty cases of fracture, fissure, contusion of nerves laceration of muscles, separation of epiphyses, etc occurring in labor he also reports two of rupture of the longitudinal sinus
[7] Quoted by Delore, Fractures du Fœtus, Dictionnaire Encyclopédique des Sciences Médicales
[8] Transactions of the London Medico Chirurgical Society, 1845
[9] London Lancet November 14, 1874
[10] Ohio Medical and Surgical Journal, 1878
[11] Op cit

force which is exerted in difficult labor is more than twenty kilogrammes, fracture results

Nevertheless, these results are not in complete accord with those of Goodell,[12] though, as will be seen, he is discussing the question of the amount of force of traction that may be safely used in a narrowed pelvis without injury to the neck of the child Nevertheless, the subject of injury to the bones of the head is also involved, and in only one instance, I believe, does he mention fracture of one of the cranial bones He states that he has on several occasions delivered living children after throwing on their necks a weight of 130 pounds He further says that, although exerting all the manual strength at his command, he has never seen the body part from the head, he mentions one instance in which there was not the slightest apparent injury to the neck though the sacral side of the head had been broken in Further, in another case, the force of traction upon the child's head, combined with suprapubic pressure, amounted to 200 pounds Stone[13] has more recently reported a case of podalic version and delivery by traction through a narrowed inlet, in which he put on the neck of the child all the force of which he was capable, using the pump handle movements described by Goodell The child was dead There was no fracture of the bones of the head,

"The spine had parted in the upper dorsal region during the traction upon the trunk, which was necessary to cause the shoulders to come low enough to reach the arms The cervical spine was not broken"

Delore's conclusion as to the amount of force followed, in pelvic narrowing, by fracture of the cranium of the fœtus is erroneous, or such injury ought to have been observed in all cases where a force even approaching 100 pounds were used

Champetier's[14] investigations as to the force that could be safely used in the delivery of the fœtus, led him to the following conclusions, the first of which does not correspond with the results obtained by Goodell, First, there is danger of fracturing one of the parietal bones, whatever the method of extraction, if the total force employed reaches thirty five to forty kilogrammes, the infant being at term, twenty to twenty two kilogrammes if it be premature Second, the inferior maxillary of a child at term will bear, without rupture, a traction of twenty five kilogrammes Third, the vertebral column of an infant at term was ruptured in three cases by a force of fifty kilogrammes

So far as objected that these results have been obtained by experiments upon dead children, and, therefore, they are not applicable to the force that may be exerted upon living ones, the answer of Matthews Duncan may be repeated He, after consulting physiological and physical authorities, could say that a child living and one recently dead were the same as to tensile strength

In this connection it is well to refer to the amount of traction which may be safely applied to the lower jaw of the fœtus, as stated by Duncan[15] from his own experiments It will be observed that his results are not the same as those announced by Champetier Duncan states

"It is now ascertained that a force of half a hundred weight (fifty six pounds) may, at least in some cases be employed by dragging the lower jaw of the fœtus without producing any calculated injury of parts."

He further says, that compound dislocation would be almost certainly fatal, and in one of his experiments this injury was done by a weight of fifty six pounds

Not only does Duncan's statement as to the force which the inferior maxillary bear without injury differ from that of Champetier, but the difference is still greater from that given by Delore, who makes this forty kilogrammes

Fractures of the cranium usually involve the parietal bones, but they may also occur in the frontal, in one of the temporals, or in the occipital Jacquemier first pointed out the separation between the squamous and the basilar portion of the occipital bone, to which some more recent writers[16] have directed attention without giving him just credit He has also stated that he has met with a fracture of the occipital in that part of the bone above the protuberance

Ruge,[17] referring to separation of the epiphyses between the squamous portion of the occipital bone and the articular part, states that Schroder is the only one who has recently drawn attention to it, and, notwithstanding its importance in regard to the life of the child, this lesion is not referred to in classic works as one of the immediate consequences of extraction The lesion may also occur in a narrowed pelvis, though the presentation be cranial In these cases there may be not only effusion of blood, but further compression by the squamous portion having its anterior inferior margin forced against the medulla.

On the other hand, severe injury of the frontal bone has been observed without serious consequences Thus, Dugès[18] saw a child recently delivered, and the left eye was almost completely outside the orbit, so great was the depression of the frontal bone, yet the infant did not have convulsions or any other grave symptoms

I have, however, seen protrusion of the eyeball in a newborn, following fracture of the frontal bone by Hodge's forceps, used in a case of tedious labor in a primipara, the delay being from an occipito sacral position, the child lived for a week after birth That an infant may survive very grave injuries in labor is proved by a case reported by Lamotte,[19] in which a surgeon, in a case of shoulder presentation, had torn away the arm, and then performed craniotomy, evacuating a large amount of the cranial contents, yet the child was born alive

[12] American Journal of Obstetrics 1875
[13] Medical and Surgical Reporter February 1880
[14] Du passage de la tete fœtale a travers le detroit supérior rétréci du bassin.
[15] London Obstetrical Society s Transactions vol xx
[16] Thus Bednar Die krankheiten der Neugeborenen und Sauglinge, Wien 1863 refers to it as a hitherto unobserved injury
[17] Bulletin de thérapeutique, from Zeitschrift für Geburtshulfe und Frauenkrankheiten 1875
[18] Jacquemier op cit.
[19] Traité des Accouchements 1726

Zweifel[20] regards fissures and fractures of the cranial bones as only of clinical significance if a sinus be injured and consequent hæmorrhage occurs On the other hand, Delore[21] asserts that all these fractures are grave, on the ground that they may be accompanied by contusions of the brain Further, there may be hæmorrhages between the bone and the periosteum, in the cavity of the arachnoid, or between the pia mater and the brain If the solution of continuity be at the position of a sinus, there is frequently rupture of the vessel He adds that in all cases in which the head has undergone severe compression from dystocia, he believes hæmorrhages occur The significance of this last remark will be appreciated, especially when we consider the remote consequences upon the mental condition of the child, as urged more especially by some English observers

Injuries to the bones of the face are usually of the inferior maxillary This bone may be fractured, or separation of the mental symphysis may occur Ruge mentions cases in which, in addition to injury of the bone, there were lesions of the soft parts—as, for example, tearing of the skin at the angle of the mouth, as well as the mucous membrane of the pharynx and rupture of the genioglossus

Yet if we fail to use traction upon the lower jaw in cases of difficult head last labors, we miss what may prove an important means of delivery in some cases, and which may be of great value when other means fail Some years ago, in a case of narrowing of the pelvic inlet, having failed to deliver with forceps, I performed podalic version, and sought to deliver by traction, while a consultant aided with supra-pubic pressure I am confident I did not use the force which some operators have safely employed under similar circumstances, yet the cervical vertebræ gave way, either by separation or by fracture, and I found apparently nothing but the integument holding the head to the body I then succeeded by traction upon the inferior maxilla, supra-pubic pressure assisting, in bringing the head into the pelvic cavity

That the head may be left in the uterus, the body being dragged away, is a fact proved by occasional instances in the history of obstetrics In other cases the division has been made, not by rupture, but by cutting through the neck An instance is reported[22] in which the obstetrician, failing to deliver the head in a case of shoulder presentation, after detaching the arm and bringing down the feet, performed decollation, and the head and the placenta remained in the uterus for forty days Freund mentions a case in which the head was left in the uterus for ten years

Probably the most remarkable case of multiple injuries to the face has been recorded by Petit[23] The face presented, rupture of the uterus occurred, and the woman died undelivered, though the forceps had been used The autopsy of the child showed multiple separations of the bones of the face, and fractures

Paralysis of one of the facial nerves has been observed most frequently, but not exclusively, after the use of the forceps In a paper read before the American Gynæcological Society in 1885, I have referred to eight cases of spontaneous facial hemiplegia, and also mention one case observed by Seeligmuller, in which the paralysis affected both sides of the face But the disorder usually occurs from the use of the forceps, and is caused by the pressure of one of the blades at the stylo-mastoid foramen, or a little in front of the lobe of the ear Landouzy, who has best described the affection, has remarked that in the infant the complete absence of the mastoid apophysis, and the slight development of the auditory canal, favor the possibility of this compression of the facial nerve near its point of emergence In six weeks, according to Parrot and Troisier, recovery usually takes place in paralysis of the facial caused by forceps Many cases however, are well in ten days Nevertheless, while recovery is the rule, it should be remembered that in some the injury is permanent Duchenne[24] refers to two patients, one 15 years old, and the other 5½ years, in each of whom the paralysis continued

It should also be observed that there may be facial paralysis in the newborn caused by protracted labor and intracranial hæmorrhage Injuries of the sterno cleido mastoid muscle have been observed by several In reference to torticollis of obstetric origin, Stromeyer and Dieffenbach explained the affection as resulting from improper application of the forceps, the muscle being bruised or torn Nevertheless, this explanation is rejected by Saint-Germain as not plausible A very large proportion of infants that have wry-neck, are born with pelvic presentation, and it is asserted that in the traction exerted rupture of a greater or less number of the fibres of the muscles take place, and a hæmatoma follows, finally, the contractions of the cicatricial tissue result in drawing the head into its unnatural position One of the first references to tumors of the sterno cleido mastoid was made by Melchiori[25] in 1862 He spoke of them as indurations of muscle, sometimes met with in young infants, and to which he found no reference in authors He met with the disorder four times, and he described the affection as an indurated, plastic deposit, while he mentions temporary deformity of the neck, he does not mention any case in which this was permanent In referring to the etiology, he suggests that compression of the muscle or laceration of some of its fibres may take place during labor

The next year both Dr Wilks and Sir James Paget[26] met with cases of what they described as chronic induration of the sterno cleido mastoid An other case of the affection was reported the same year by Harris, and thus the published cases in a few months were at least six, but no reference was made by any of the reporters to the previous observations of Melchiori

Bryant,[27] in 1863, reported two cases of thickening of the sterno cleido mastoid One patient was 4

[20] Lehrbuch der Gerburtshulfe
[21] Op cit.
[22] Obstetric Gazette from Archiv für Gynäkol March, 1883
[23] Annales de Gynécologie, 1874
[24] See Nadaud Des Paralysies Obstétricales des Nouveau nés
[25] Medical Times, London vol ii, August 9, 1862
[26] London Lancet, vol i, 1863, pp 11, 236, and 313
[27] London Medical Times

the other 8 weeks old when he saw them, in each instance the birth was with pelvic presentation

Probably in all the cases, or at least in a majority of them, the disease was hæmatoma. Nevertheless, Blachez[28] regards these tumors as caused by an interstitial myositis in consequence of traction upon the muscle He describes the tumor, observed in one of his patients, as elastic, almost painless, and the size of a pigeon's-egg, it was situated in the right sterno cleido mastoid, and was not discovered until two or three weeks after birth, when the attention of the parents was called to it by the infant's keeping the head inclined to the right side

Zweifel recognizes injuries of the sterno mastoid muscle in labor as a cause of torticollis

Professor Albert,[29] of Vienna, referring to a child with torticollis, stated that the sterno cleido mastoid may become contracted during intra uterine life, or be injured during birth In breech presentations, and in difficult forceps delivery, a laceration of this muscle may occur, and be followed by inflammation and contraction

While such injuries are more frequent after head-last labors, yet they are also met with in vertex presentations, and when the forceps has been applied

On October 2, 1861, a paper was presented to the London Obstetrical Society by Dr Tyler Smith for Dr W J Little, the title being "Upon the Influence of Abnormal Parturition, Difficult Labors, Premature Birth, Asphyxia Neonatorum, on the Mental and Physical Condition of the Child, especially in relation to Deformities "[30] In this paper, which by the way mentions two cases of wry neck, that he attributed to difficult labors, the author says

"It is impossible not to connect the persistent affections of the intellect, of volition, and of organic life, with the injury the several nervous centres suffered in some instances before the fœtus had reached the maternal pelvis, in others whilst in transit through it, and in a third set of cases, where the fœtus was exposed to neither of these kinds of injury, it suffered from asphyxia neonatorum, suspended animation, and its concomitant congestions, effusions, capillary apoplexies of the brain, medulla oblongata, and spinal cord "

Dr Langdon Down, in discussing the obstetrical aspects of idiocy, stated that in a very large number of cases of idiocy the subjects were born after difficult labors, these being unusually tedious, and he held that if a neurotic tendency was present the tedious labor and suspended animation might determine the catastrophe, where otherwise all might have gone fairly well

The following note from one of Dr Little's[31] correspondents may be of some interest, it is in reference to a young man in regard to whom inquiry had been made by Dr Little

"I have again ascertained he was asphyxiated for two hours when born, and that he has always been a weak creature, very slow in mental development with difficulty in speaking trembling and shaky, unable to fix his attention on a book, and a bit of a punster" The final statement "a bit of a punster," is conclusive as to the intellectual feebleness of this unfortunate man

These views are further strengthened by the statement of Dr Arthur Mitchell[32] that he believes there is a connection between difficult labor and idiocy

Injuries of the Trunk—The chief lesions of the trunk are rupture of the connections between the dorsal vertebræ, or fracture of one of these, injuries to the abdominal wall by a badly directed blunt hook, effusion of blood in muscles, similar to those that have been referred to as occurring in the sterno cleido-mastoid, retropleural hæmorrhages along the spinal column in case rupture of this column occurs, hæmorrhage into the abdominal or thoracic cavity, and collections of blood beneath the capsule of the liver, or of the kidneys, and rupture of the sacro iliac joint Ruge has collected forty four cases of injuries to the fœtus occurring in extraction after version, and twenty nine of injuries in pelvic presentations, in the former there are three of rupture of the sacro iliac joint It is probable, as suggested by Zweifel, that some cases of ankylosis affecting this joint, of which the etiology is obscure, are to be attributed to injury in birth

Zillner[33] has reported a rupture of the sigmoid flexure occurring in labor

Injuries of the Arms—In connection with these lesions those of the scapula and clavicle, which belong to the arms rather than to the trunk, will be considered Delore states that fractures of the humerus are more frequent than all others, since they are usually readily cured, and are generally caused by *maladresse*, they are rarely published But he further says that this accident may occur in the hands of the most expert accoucheur if the pelvis be contracted They most frequently occur in the disengagement of the arms after podalic version when extraction is necessary, and they may also happen in pelvic presentation, but usually, if we do not have to extract the child—that is, if the expulsion can be left solely to nature—the arms will not ascend, but remain applied to the chest Smellie[34] states that he fractured the humerus in a case in which he turned and delivered by the feet, and this is the only one he gives, while he mentions three cases of fracture of the femur, two occurring in the practice of his assistants, and one in his own

All obstetricians agree that in bringing down an ascended arm it is important no pressure be made until the internal angle of the elbow is reached, and that three or four fingers should be employed, and not one or two Pajot regards it as important that the posterior arm should be liberated first Kustner[35] describes separation of the epiphysis of the head of the humerus from the diaphysis as one of the injuries

[28] Gazette Hebdom May 19 1876
[29] Obstetric Gazette September 1882
[30] Obstet Soc'y's Transactions, vol xviii
[31] Obstetrical Transactions, vol iii
[32] Medical Times 1862 1863
[33] Centralblatt für Gynakol 1885
[34] Sydenham Society's edition of Smellie's Midwifery, vol iii pp 296 297 This great obstetrician in the first volume op cit remarks In laborious or preternatural cases when considerable force hath been used in delivering the child the whole body ought to be examined and if there is any mark or contusion on the head it will disappear if anointed with pomatum and gently rubbed off or chafed with the accoucheur's hand if any limb is dislocated or broken it ought to be reduced immediately luxations though they seldom happen, are more incident to the shoulder than to any other part the humerus being easily dislocated and as easily reduced The bones of the arm and thigh are more subject to fracture than any other of the extremities the first is easily cured because the arm can be kept from being moved but a fracture of the thigh bone is a much more troubles me case because over and above the difficulty of keeping the bones in a proper situation, the part is often necessarily moved in cleaning the child "
[35] Ueber die Verletzungen der Extremitäten des Kindes

of labor which may be overlooked, or falsely regarded as a luxation, fracture of the neck of the scapula, or injury to nerves Fractures of the clavicle, separation from its sternal attachment, transverse fracture of the scapula, separation of the epiphysis of the neck of the scapula, injury of the acromion process, and dislocation of the humerus, have been observed

Fracture of the clavicle is most frequently caused by pressing directly with one or two fingers in the endeavor to bring the head through the pelvic inlet after podalic version, or in pelvic presentation McClintock, in one of his annotations to the Sydenham Society's edition of "Smellie," observes "Although Smellie gives no example of fracture of the child's clavicle during delivery by the pelvic extremities, yet, in my experience, it is a bone very apt to be broken by the manipulations of the accoucheur, more so even than the humerus, this may, perhaps, be explained by its greater degree of ossification"

Paralysis of the Arm—Sinkler recognizes hemiplegia as, in some cases, the consequence of injury at the time of birth, either from the forceps or from the pressure of a prolonged labor Nadaud gives seven cases of paralysis of the arm attributed to the forceps, the first one of this injury reported is one of Smellie's Jacquemier mentions an instance of paralysis of the deltoid following a long and difficult, but spontaneous, labor, the recovery was complete in fifteen or twenty days He attributed the disorder to compression of the axillary nerve against the humerus at the point of its attachment to the deep face of the deltoid Fasbender found a tumor, as large as a pigeon's-egg, situated above the right clavicle, in an infant soon after delivery, the hæmatoma gradually disappeared, but at first there was paralysis caused by nerve compression Delore suggests that paralysis may be caused by the rupture of a nerve trunk near its connection with the spinal cord He states that this accident is not rare in the newborn or in young infants as a consequence of traumatism, it is followed by incurable paralysis, which is compatible with life if an upper member only is affected

Disengagement of the extended arms in pelvic deliveries, traction upon the axilla in delayed delivery of the body in vertex presentation, the traction in some cases being with the blunt hook, in others with the finger, have resulted in paralysis of the arm So, too, the same disability has followed a case in which the arm has protruded in shoulder presentation, and delivery effected by podalic version

Luxation of the humerus has, in some instances, been mistaken for obstetric paralysis Further, it is important to distinguish between cerebral and traumatic paralysis Duchenne[36] gives an instance in which there were both cerebral and obstetric paralysis, the latter consequent upon a fracture of the ulna near the elbow

Fractures of the femur may be spontaneous, or consequent upon artificial delivery Meyer[37] has recently reported two cases in which spontaneous fracture of the femur was observed, in one a single femur was broken, but in the other both femurs In May, 1847, Dr Vanderveer[38] reported a case of such fracture in childbirth

But probably more fractures of the femur are to be attributed to the attempt to pull down a lower limb in pelvic presentation when the presenting part is already partially in the mother's pelvis, before pressing up that presenting part, or from the use of the blunt hook Delore's experiments show that with the untired finger traction to the amount of fifteen kilogrammes may be made upon the groin, and this cannot break the femur If a force of fifty-five kilogrammes is employed upon the femur, fracture occurs, if the instrument be perpendicular to the bone, the latter gives way with a pressure of twenty kilogrammes

Again, the bone has been broken, or that which is equivalent, separation of the epiphyses been caused from traction upon the leg A R Simpson mentions an instance in which, podalic version having been performed, the right lower limb brought down, and traction made, subsequent examination showed that there were three such fractures [39]

Luxations of the femur consequent upon obstetric operations, according to Ruge, are exceedingly rare, upon 300 autopsies of newborn infants he did not find a single true dislocation of this bone

Kustner, in referring to luxations of the hip, speaks as follows

> "Goschen relates a case in which Langenbeck reduced such luxation after the subject, a girl, was 13 years old, and mentions in this connection that Stromeyer had met with 20 cases. The only possible way in which this injury could occur would be by sudden and violent force drawing down the limb, and then dislocation upon the ilium might result But the force must be great I have suspended to the leg of a child, from six to ten minutes, a weight of from thirty to forty kilogrammes, without any injury to the joint"

Complete paraplegia in connection with facial paralysis of the right side has been observed following a difficult labor in which the forceps was used Examples of rupture of the spinal cord, in connection with rupture of a vertebra, have been observed, and, of course, paralysis of the lower limbs *It is* remarkable that in two such cases the children lived for some hours Paraplegia in the newborn is, as Nadaud states, usually an evidence of serious lesion of the cerebro spinal organs, and the child dies after a short time

I think the study of these cases of obstetric injuries, which might be greatly extended—for much more remains unsaid than has been said—ought, in the first place, to lead us to a larger charity for fellow practitioners, as many of the most serious injuries in childbirth may occur without the slightest blame necessarily attaching to the accoucheur

Another lesson is that an important distinction should be made, as urged by Ruge, between podalic version and extraction, never resorting to the latter, unless absolutely necessary, after the performance of the former, and thereby many of the obstetric lesions of the fœtus may be avoided Very wisely, Lamotte says, referring to the injuries that may be

[36] See Nadaud, op cit
[37] Archiv f Gynakol
[38] New York Medical Journal
[39] Edinburgh Medical Journal, 1880

done in labor to the child by the accoucheur, "The hand improperly used is more dangerous than any instrument"

Again, the question arises as to the safest manual means for the delivery of the head in head last labors In Cléslewicz's collection of cases of injuries of the fœtus in labor, there are several in which very serious consequences resulted from employing the Prague method One of these, reported by Gusserow, showed, upon post mortem examination, rupture of the vertebræ and most of the soft parts of the neck so complete that the head was attached to the trunk only by the skin and the vertebral arteries Ruge, rejecting both the Prague and the Vienna method, prefers elevation of the occiput, bringing the face down, and carefully conducted expression, as least liable to injure the fœtus

Another question of practical interest, is the best method of delivery in pelvic presentations, when interference is necessary Should we follow that employed by Goodell, in all cases bringing down a foot as soon as possible, and thus be commander of the situation, in case necessity for extraction arises? Must we use the blunt hook? Is the application of the forceps to the breech to be generally advised?

Again, while treatment of fractures of an upper limb, or of the clavicle, is said to present usually no great difficulty, can a similar statement be made as to fracture of the femur? What method of treatment is best?

In depressed fractures of the skull, is it not probable that some lives might be saved by the use of the trephine? and in other cases, not followed by death, perfect mental integrity insured?

Finally, many questions as to the diagnosis of obstetric paralysis of the newborn arise, and, also, as to when and what treatment should be employed

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DIPHTHERIA

Read in the Section on Diseases of Children, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

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I am well aware that the subject I have selected is one which has been again and again discussed, sometimes by men who have evidently had experience with the disease, while at other times it is evident that the individual who has undertaken to discuss the disease had in reality only had experience with ulcerated tonsilitis, or what may be called "homeopathic diphtheria" It is not my purpose to take up your valuable time in the discussion in detail of the definitions, synonyms and history of the disease, but to consider such general conditions pertaining to symptoms, causes and treatment as I have formed opinions concerning, and which I believe are not fully set forth in all particulars, in even the various treatises upon the subject

Let us admit the disease to be one of the zymotic class, specific, highly infectious, slightly contagious, the chief early symptoms of which are malaise of a few hours duration, with or without chills, followed by slight fever, which is indicated by slight increase of pulse and increased marking of temperature by the thermometer There is seldom vomiting, and very seldom do we find convulsions at this stage of the disease

The local symptoms, are at this stage of the disease, of so slight a character, so far as pain and inconvenience in deglutition are concerned, that unless the local lesion of false membrane formation is suspected, it would be readily overlooked, especially by the inexperienced The early symptoms of diphtheria, are so mild in form in the majority of cases, that the real nature of the disease is readily overlooked, by physician, parent and patient Any physician, who has had extensive experience with the disease, I believe, will bear me out in the statement, that time and time again, is found an extensive and well developed exudation upon the fauces and perhaps extending up over the arches of the palate and over the uvula, where the local inconvenience was so slight, that the parent did not even surmise the real nature of the trouble, sending for the physician simply because the child had not been feeling well, for twenty four or thirty six hours, and desired a physician to determine what the difficulty was To be called twenty four or more hours after membrane formation has set in, which I believe is always if sought for, found to exist quite as early as any *noticeable* degree of fever exists, is *late* to assume charge of a genuine type of diphtheria when attacking an individual whose system is in condition to furnish fertile soil

The severity of the disease, as I shall endeavor to show in this paper, is not and cannot be usually discovered by the constitutional disturbances found to exist in the symptoms during the first thirty six hours, in fact, the severity of the attack is seldom to be judged of by the constitutional symptoms so far as relates to febrile disturbances, being, in the majority of cases, only moderate in degree, frequently very slight, and only occasionally is very high temperature found with corresponding pulse The severity of the attack being influenced by the soil in which it develops, and that *alone* determining it, and this in time proportionate with the fertility of the soil, as the varying systems would furnish for its development

As an illustration let us admit that the disease may possibly develop with equal readiness in all tissues, all things equal, in all persons The system, however, in some persons is in such a state, blood and other elements, as to afford but barren soil, while in others it is fertile, in the former the individual is proof against constitutional contamination, while in the latter the system becomes rapidly saturated, unless something is done, either to destroy the disease germs or to render the system proof against their inroads

Two classes of remedies then are indicated germicides and fortifiers Germicides may be applied locally and termed direct, and constitutionally and termed indirect, the latter so altering the character of the blood that the germs, as soon as reaching it, perish

Fortifiers constitute 1 Such remedies as would, in the first place, by local application, protect or place in such condition, tissues of the fauces and others, as to prevent the lodgement and development of the disease 2 The second class of *germicides* here apply 3 The class of remedies, hygienic surroundings, food and elements which tend to improve and strengthen the quality of the blood and to bring the system into such a condition as will most nearly render barren the soil for the development of the disease

Diphtheria is a disease which runs when terminating fatally, usually a rapid course, the majority of cases terminating in four to six days Hence, whatever is done with a view to averting fatal results and controlling the disease, must be done promptly and thoroughly, it matters not whether the disease be first constitutional, or first local, or both In this connection I quote the following extract from a paper contributed by myself over five years ago "Concerning the seat of the disease there can be little doubt, nay, there can be *no doubt* in the minds of those who have had experience with it, that if it is not a constitutional disease at the outset, it very soon becomes such And if the disease is communicable through drinking milk, etc, while micrococci may attach to the fauces and tonsils and thence originate the disease, it is quite as likely that some may be, and are carried into the stomach, and so on into the circulation And in such an event it would be possible for the disease to be sometimes first constitutional and at others first local In either event, if the disease germs are lodged any where in the system, local or otherwise, the constitutional and the local symptoms will soon be manifest, so that the treatment resolves itself into local and constitutional from the outset At any rate this is the only safe mode to adopt In some instances, if the disease were purely local (which I believe it may sometimes be), and we had some means by which we might to a certainty settle this point, we might then adopt a purely local treatment, perhaps with success, if the cases were recognized in their *incipiency*, but having no such means we must be alike prompt in local and constitutional treatment, if we would save our patient, for delay in either is almost certain death" (Concerning the seat of the disease, there can be little doubt)

As to what constitutes promptness and thoroughness is explained in the further quotation from the same paper

"If you begin treatment within twelve hours from the commencement of membrane formation, there should be no fatal results If you begin treatment eighteen to twenty hours after the commencement of membrane formation, you may expect to lose a patient occasionally If you begin treatment twenty four hours after the commencement of membrane formation, you may, in spite of all you can do, expect a great many fatal results"

Now I imagine I hear many saying "it is not diphtheria he is discussing," but it is I imagine I hear others saying "if the disease is of malignant type, it matters little *what* or *when* you do for the patient, few, if any, cases will recover" Here arises the query, are not all germs which produce the disease alike, admitting there may be occasionally an imperfect one? And is it not more particularly the soil in which the germs lodge, than that it is, there is a simple and a malignant type of the germs, malignity depending upon, or being due to *quantity* and *not quality* of germs? In the prevention of development of quantity, is the secret of success, in treatment, in the majority of cases of diphtheria, especially the class of cases that would and do suffer from blood contamination, not due to immediate or partial, laryngeal stenosis, resulting in immediate or gradual asphyxia, due to retention of carbonic acid in the blood, but due to overwhelming quantities of the disease germs If there is any virtue in treatment of the disease by medicine or otherwise, the importance, therefore, of early care is readily understood

Having seen that the disease under consideration is one which is likely, owing to its mild symptoms to mislead even the careful observer, it becomes then the duty of the physician to not only examine carefully the throat of every adult whom he may be called to see, when the same has been exposed to diphtheria, even if no local inconvenience is complained of, but also to examine carefully the throat of any child who complains (whether diphtheria is known to exist in the locality or not) of slight inconvenience in swallowing or an uncomfortable feeling in the throat It is further, the duty of the physician, to advise persons who have children, to examine carefully the throats of those who may complain or seem ill in the least, when diphtheria *exists* in the locality, and also to send for a competent physician if anything resembling membrane is discovered If they have any concern for the safety of the child, they had better send a hundred times uselessly, than to delay once, a dozen hours too long

In the throat difficulties, the result of contracting a cold, especially tonsilitis of an acute nature, whether a simple or ulcerated case, the local symptoms in the way of pain are always such as will command attention at the outset of the disease, the degree of fever existing also is such as would, in the majority of instances, cause the inexperienced physician to have much concern for the welfare of the patient These conditions are worthy of note in the differential diagnosis of diphtheria and acute tonsilitis, the result of cold In the former, the local inconvenience and the general or systemic disturbances are not in degree at all in keeping with the dangerous character of the disease The tendency of the disease, being toward a rapid fatality when not treated, and often so when not treated timely and efficiently, while in the latter, the local inconvenience and general symptoms are in severity altogether out of keeping with the slight dangers of the disease, the tendency being even without treatment toward recovery

Is membranous croup and croupal diphtheria, (not diphtheritic croup, because there is no such disease,) one and the same disease? Difference of opinion still exists in regard to these two diseases, or as some

believe, in this *one* disease Properly there is no such disease as diphtheritic croup, but it is diphtheria of a croupal type inasmuch as it involves with in in flammatory condition and an exudation, the larynx, the same organ affected as is the case in simple or spasmodic croup, and yet the germ or cause of diph theria and the cause of spasmodic laryngitis, differ more widely than day and night In spite of this the nomenclature is simple laryngitis, membranous laryn gitis and diphtheritic laryngitis, the former two are correct, but there is no such disease as the latter would indicate, the *disease* not being indicated by the *part* affected but the *type* of the disease being indicated by the part affected, hence, what is com monly called diphtheritic croup should be called and is intended to mean, croupal or laryngeal diphtheria Believing that membranous laryngitis is a separate and distinct disease from laryngeal, or any other form of diphtheria, I will refer briefly to a few differen tial symptoms or conditions In simple or spasmodic laryngitis the attack is sudden, no exudation, with or without severe fever, first paroxysms most severe, at tack much abated in twenty four hours In mem branous laryngitis, attack sudden, similar to that of simple laryngitis, laryngeal symptoms, after first paroxysm becomes more severe, paroxysms become more frequent and a constantly increasing dyspnœa exists, pulse and temperature also gradually become higher, there is never any exudation upon the pharynx or tonsils, and there never exists the odor so char acteristic of diphtheria, whether it be of laryngeal, pharyngeal, or nasal variety The symptoms of a fatal case are gradual asphyxia, with exudation in the finer bronchial tubes and exhaustion from prolonged high temperature, the result of acute inflammatory conditions of prolonged duration, having continued a week or more No signs of systemic contamina tion, the patient dies exhausted

In croupal diphtheria the patient is indisposed, a general malaise existing for a matter of twenty four hours, he becomes gradually hoarse and respiration becomes more and more difficult There is a strik ing absence in the frequency of the spasmodic coughs so common in laryngitis, of either variety The temperature and pulse are not, as a rule, higher than in the ordinary types of diphtheria The breath is characteristically offensive, there are always found patches of exudation upon the tonsils or pharynx, usually of a button like form, the patient sinks rap idly, usually perishes in from four to six days, not from asphyxia, but from blood-poisoning, with all the symptoms so characteristic of the laryngeal type of diphtheria I give below an extract from a letter re cently furnished by myself, relative to an outbreak of diphtheria in our city during the year 1886, which may be of some interest in connection with this paper

There were reported during the year 1886 ninety one cases of diphtheria In some instances, through misunderstanding or neglect, reports were made of the existence of the disease but once in the same family, although cases subsequent to the first one occurred, and in this manner it is probable that some of the cases reported as diphtheria were cases only of ulcerated tonsillitis It is safe, however, to esti mate that there occurred during 1886, something like 100 cases of diphtheria There were reported deaths caused by diphtheria during 1886, 41, as follows

January—1 male, æt 4 years
February—1 male, æt 1 year
March—1 female, æt 7 years
July—1 female, æt 3 years
August—Males, 3, æt 1, 1 and 10 years, 1 female, æt 6 years
September—Males, 4, æt 7, 7, 8 and 10 years, 3 females, æt 10 months, 2 and 2 years
October—Males, 7, æt 1, 2, 2, 3, 5, 8 and 9 years, females, 6, æt 1, 3 3, 3, 6 and 6 years
November—Males, 2, æt 3 and 12 years, females, 5, æt 8 months, 2, 4, 4 and 4 years
December—Males, 2, æt 3 and 5 years, females, 4, æt 1, 2, 7 and 9 years Total—Males, 20, females, 21

Average age of males, about 5 years and 2 months, average age of females, about 3 years and 8 months, the difference in the age as between male and female being about 1 year and 8 months Males the oldest It will be seen by table, that of those who died only about one third, or 33⅓ per cent, were school chil dren It will be further seen by table that the dis ease increased in August, and reached its maximum in October, and diminished in November and De cember in about the same ratio as it increased in August and September Various questions suggest themselves as regards the abatement of the disease, among them Did we find an obstructed sewer? Did we find an impure water supply? Did we close our public schools? No, we found nothing, changed nothing, and did not close our schools The disease seemed to come with the winds and vanished with them Had we made notable changes in water sup ply, or sewage, or closed our schools at a moment when the disease was at a maximum, and the abate ment then occurred which *did* occur from unknown causes, all interested would have been unanimous in declaring that the cause of the disease in this local ity had been found and removed During a given week in October occurred the greatest number of cases and the largest fatality, and during the week following, there were reported only a few cases So striking was this, I remember remarking to a mem ber of the School Board "If you had closed the schools last week with a view of breaking up the diphtheria, and not yet reopened (a week later), all the city would have been unanimous in declaring that you had done just the right thing to arrest the disease"

For a time it seemed the cause of the disease ex isted in well water, all cases occurring in families who used well water When, however, cases oc curred in families who were using river water, this idea was promptly abandoned What caused the disease and what abated it are questions of interest We understand that the disease is, when once devel oped, easily communicated to other individuals by direct contact, mainly through respiratory passages, but inasmuch as our schools were not closed, this possible (not probable) source of communication was not and is not now removed

Our hygienic surroundings, water, sewage, etc, except as affected by frost, remain the same, and yet the disease has substantially vanished from our midst What, then, has caused diphtheria among us? Diphtheria is classed as among the diseases due to faulty hygienic surroundings or filth My own explanation of the matter is that in filth exists and may be found a factor in the development of diphtheria, but that, in order to develop the disease from these sources, there must exist certain atmospheric influences which, coupled with tangible impurities, develop the disease, but that the disease *is not* and cannot be developed by either of these factors alone

Admitting the nature of the disease to be of rapid course, requiring to be met promptly with remedies which will destroy germs and remedies which will support and sustain the system, the question remains, what remedies are best adapted to accomplish the desired results? In the way of drugs proper, two remedies above all others quinine and tinc chlor of iron I am well aware that these are not new remedies, and I am equally well aware that the profession have not, at least until recently, attached to these remedies the importance which they merit It is generally admitted and unquestionably demonstrated that quinine is a specific in the destruction of malarial germs, and if I have seen the good effects of quinine in malarial disease I have seen equally good effects in diphtheria, and believe that when it has failed it was under circumstances where the system had already become so overwhelmed with the disease that *no* remedy could be properly carried into it, or that it was not properly administered It should be remembered that, in treating malarial disease, it will recur and wait for the remedy a matter of weeks, and then yield promptly This is not the case in diphtheria The patient must have full doses, an adult, the first dose 15 or 20 grains subsequently 10 grains every 6 hours during the first 36 or 48 hours, after this the dose should be such as will continue a slight ringing in the ears Care should be taken to guard against overdosing with quinine in diphtheria, since in large and continuous doses it probably acts as a depressment upon the nerve centres, the disease itself having the same tendency, it is important to be cautious at least The effect of quinine would be in the first place as a direct germicide, and in the next place under the class of fortifiers, so altering the character of the blood as to make it proof against the inroads of diphtheria germs It may also be considered a fortifier on account of its general tonic properties such as are obtained when given in small doses

Tinc of chlor of iron may be used locally as a direct germicide and constitutionally as a fortifier by preserving the purity of the blood and nutrient qualities, possibly also having germicidal effect through the blood How shall it be used? As a local application, in varying strength, from 1 part of iron to 3 of glycerin and so on to full strength, as the case in the judgment of the physician requires Applications should be made twice or three times in twenty four hours by the physician (*never* entrusted, if it can be possibly avoided, to parent or nurse), because they never will even *half* do the work, failing partly from sympathy and partly for want of experience Twenty drops of the muriated tincture should be given an adult in a teaspoonful of water every two hours so long as the stomach will bear it, if the stomach becomes irritable then the interval must be lengthened It is not amiss to call attention here to the fact that chlorides of various kinds have been and are recommended in the treatment of this disease Their virtue, if any they possess, is probably due to direct germicidal properties, and also the second class of fortifiers As a solvent of membrane, fumes of slacking lime are among the most valuable applications, whether the attack be one of laryngeal or other type Hot applications I believe to be always injurious, predisposing to the more rapid development of the disease germs Ice may be taken frequently in the mouth and allowed to dissolve, when desired by the patient Stimulants must be given in full doses, whiskey, brandy, or wine, as may be indicated or as the patient may prefer, at the approach of symptoms of prostration Many other remedies might here be discussed, suffice it to say, that all remedies having properties and qualities identical with the properties of the remedies here recommended may be substituted, and that *all* remedies which have a depressing effect upon the system should be cautiously administered, and no physician should trifle with this disease This feature in the treatment of diphtheria should be ever remembered by the physician, that to insure success, in all cases, you must insist that medicines, stimulants and food be given on the hour, night and day, and that all local applications should be made by the physician, and not entrusted to parent or nurse

To show the importance of this thoroughness and the necessity of promptness in treatment, I will cite the circumstances connected with the occurrence of the disease in a family of ten persons, father, mother, four children between the ages of 6 and 12 years, and four children (three sons and one daughter), between the ages of 17 and 25 All but the father contracted the disease I was called in consultation when all had contracted the disease The mother, adult daughter and two adult sons had already died, and one other son was in a dying condition (all happening within a period of two weeks), the children under 12, four in number, all recovered The treatment adopted was the same for children and adults Why did the adults die and the children recover? Because the adults refused to have any treatment until the disease had far advanced, and the children were forced to treatment early

204 E Main St, Marshalltown, Ia

HYDATIDIFORM MOLE

Read before the Medical Society of the District of Columbia, September 23, 1887

BY THOMAS C SMITH, M D,

OF WASHINGTON, D C

Hydatidiform degeneration of the chorionic villi is an unusual disease, but it is not so rarely met with

as might be inferred from the experience of Madame Boivin, who "saw but one case in 2,375 deliveries" (Parvin) I have met with two cases, that I think are sufficiently interesting to place on record The second in chronological order will be first narrated, and is as follows

Mrs F , white, nearly 20 years of age, was married April 11, 1887, menstruated April 17, and again May 17 In June the menses failed to appear and the usual symptoms of pregnancy shortly supervened Nausea and vomiting were almost incessant up to the time of my first visit, Sept 15, 1887 The mammary glands had, also, increased in size, and the pigmentation of the areola was well marked Early in the morning of Sept 15, the lady was taken with pain and hæmorrhage, and when I arrived at her house she was flooding profusely Examination revealed the uterus enlarged and reaching to the umbilicus, and quite hard to the palpating hand On making a vaginal examination the os was found to be closed, but the blood was flowing freely Believing miscarriage to be impending, and from the quantity of blood lost, not to be prevented, the vagina was tamponed, and the patient given ergot and opium The patient believed herself to be four months pregnant, while the size of the uterus indicated that she was at least six months advanced in gestation Four hours later the condition of the patient was practically unchanged She was still flowing freely and the pulse was quick and weak The tampon was removed and the cervix still found undilated The vagina was again packed with absorbent cotton, and the same medicine continued In the evening there had been no flow and the patient expressed herself as being comfortable At 11 o'clock at night I was again sent for and found the patient in great pain and losing some blood The tampon was removed and the os found to be open and dilatable, so that the index finger was readily passed into the uterus where it encountered a mass which felt like an aggregation of dense cobwebs Owing to the sensitiveness of the abdomen, the patient could not tolerate sufficient pressure to enable me to force the uterus down far enough for the finger to clear out the contained mass, and it became necessary to administer ether, after which the hand was passed into the vagina, and the finger in the uterus broke down the diseased tissue, and on removing the hand the uterus promptly contracted and extruded such of the growth as had been detached It was necessary to introduce the hand several times, and then I had the satisfaction of finding the womb entirely empty The hæmorrhage ceased, but ergot was given to secure firm contraction The lady has completely recovered except from the anæmia which ensued on the loss of blood

It may be stated here that at no time during the pregnancy was there any bloody or watery discharge from the vagina previous to my visit

The quantity of currant and grape like bodies removed from this lady was about a quart Many were detached singly, while others were in clusters and adhering to the parent tissue

The other case that came under my treatment was that of a lady who had borne two children, and who believed herself to be again pregnant When I was first called she was having some flow of blood from the vagina, but as the os was not dilated I endeavored by rest and suitable treatment to prevent what appeared to be an attempt to miscarry This effort proved effective at the time, but hemorrhage recurred during the following six weeks and finally, on finding the cervix dilatable, the hand was passed into the uterus and not less than a half gallon of hydatidiform bodies removed The anæmia in this case was very great, but the lady entirely recovered I have since delivered her of two children This case occurred over six years ago and is reported from memory, but in conversation with the patient a few days ago she verified the history given above

The cystic bodies from the last mentioned case were generally much larger than those presented this evening

I have found the study of the disease under consideration a very interesting one, and will give a brief summary of the points worth noting

It is now universally conceded that the affection is due to a proliferative degeneration of the villi of the chorion Formerly no distinction was made between the true hydatid and the cysts found in the disease under discussion To Cruveilhier is due, I believe, the credit of demonstrating the difference between the conditions

The time at which the chorionic degeneration commences and the exciting causes are questions of interest The weight of opinion, however, is that the disease necessarily begins within the first three months of gestation Thomas sufficiently elucidates the matter when he says "It is probable that after the end of the third month no such degeneration can occur in the secundines—for after that period the placenta is formed, the villi which existed at its site become vascular, and those over other parts of the surface of the fœtal sac undergo atrophy It is true that at the period of parturition, masses of these sacs have, in rare instances, been expelled, but in such cases it is probable that some portion of the chorion had begun to degenerate at an early period of conception" Dr Graily Hewitt dissents from the generally accepted opinion that the starting point of the disease is disease of the chorion, and endeavors to show that the degeneration is the result of the death of the embryo, but this view is apparently refuted by the fact that the disease may continue until the completion of gestation and the birth of the living child But the fact that in twin pregnancy one fœtus may be carried to term, while the chorion of the other may degenerate and be cast off at the time of parturition, or later, lends plausibility to the explanation given by Hewitt

And the fact that moles may be retained for an indefinite period, is an important and far reaching one, and the necessity of admitting and recognizing it has been seriously insisted upon, as the character of women may be assailed unless that is done Thus a woman may cast off a hydatid mole long after the death of her husband, or a child may be born at term and months afterward a mole may be discharged

If this should happen during the absence of a husband the character of a wife might be smirched More than one authority has directed attention to this matter

Disease of the endometrium, it has been claimed, may be a cause of hydatid degeneration of the chorion, but it is only mentioned to direct attention to the subject

The query has been propounded, whether a portion of placenta retained at the full term can take on hydatidiform change? Some have answered in the affirmative, (Montgomery and Ramsbotham) but all recent writers dispute this conclusion

Another interesting fact is that the degeneration of the chorion may occur in successive pregnancies Tait instances the case of a woman who had this occur five times, and who at the time he wrote was again pregnant, but without showing signs of the disease

Concerning the symptoms of hydatidiform degeneration of the chorion, it may be said that there are but few that are characteristic of the disease Rapid development of the uterus is the sign most generally present, but the patient is generally too ignorant of the subject to consider the meaning of the enlargement, and the physician, when called to the case, is so prone to believe that the woman has made a mistake in her reckoning, or is deceiving him to cover up her misdoings, that he pays little attention to it until the degenerated mass has been expelled Still, this is an important symptom, for it is conceded by all that the uterus is enlarged far beyond the size it should have attained if the period of gestation is correctly given by the woman In my patient the enlarged uterus reached the umbilicus, but according to her story she could not have been quite four months pregnant when the diseased mass was thrown off Attacks of hæmorrhage, or of bloody and watery discharges recurring at intervals, are relied on for aid in diagnosis One of my patients had this symptom, the other not Expulsion of vesicles would be characteristic if they were found on examination, but the symptom is too often absent Other signs are irregularity in the shape of the uterus, absence of fœtal heart sounds and of fœtal movements, enlargement of mammary glands but no pigmentation of the areola, according to Bedford, but there *was* pigmentation in my case, and in my opinion it ought to be found for the pre-existence of pregnancy is a *sine qua non* to the development of the diseased state under discussion Meigs says, "Intense constitutional irritation accompanies hydatid pregnancy in those examples of it where the growth is violently rapid "

The symptoms then to be relied upon according to Depaul, are 1 Rapid development of the uterus 2 Attacks of hæmorrhage 3 Expulsion of vesicles

The prognosis is usually favorable, but exceptionally the proliferating bodies develop so as to enter the uterine sinuses, thereby producing great thinning of the walls of the womb which favors rupture of the uterus and discharge of its contents into the peritoneal cavity Tyler Smith once saw a case in which the uterus had been ruptured by the violence of its contractions in expelling a hydatid mole But the greatest danger is from hæmorrhage and its sequalæ —shock and anæmia Lusk reports a case of death in a patient of his from this cause

The *treatment* of these cases will be mainly applicable to miscarriage If the hæmorrhage is slight and the os uteri closed, rest and opium will meet the indication For severe hæmorrhage, use the tampon until the uterus dilates or is dilated by any suitable method, and remove the offending material with the finger The hand should be introduced into the vagina to facilitate the emptying of the uterus, after the patient has been etherized

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MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS —(See the preceding numbers of THE JOURNAL) 24 In regard to the treatment of tuberculous affections of joints, I believe that parenchymatous injections with a Pravaz's syringe (of tincture of iodine, carbolic acid, sublimate, arsenic, etc) have thus far given no results worth mentioning Puncture of the joint with a large trocar (an abdominal trocar), and subsequent washing out with disinfecting and other solutions, is effective only in exceptional cases (Hydrops tuberculosus, etc) In regard to operative procedures, the following are to be considered

a Incision (and where possible double incision) *and drainage*, with or without scraping out the joint with the sharp spoon (Arthrotomy)

b Total extirpation of the capsule of the joint, making a large incision as when opening the joint for resection, leaving the bony epiphyses and articular cartilages (Arthrectomy or arthrectomia synovialis)

c Resection of the joint, with simultaneous extirpation of the capsule of the joint, but always leaving the healthy parts of the bones, and often making only partial or at least atypical resections (Arthrectomia ossalis et synovialis)

The former operation of leaving the gravely diseased "fungous" capsule of the joint, and simply decapitating the articular end of the femur and humerus, without complete and thorough cleansing out of the socket, should be abandoned

As to the use of the sharp spoon it should be remembered that with it those inter-muscular, periarticular, and subcutaneous abscesses communicating with the diseased joint or osseous foci, and which are lined with a characteristic and easily detached membrane, can be completely cleansed of all tuberculous granulations, furthermore, the sharp spoon proves sufficient in the case of bone, as we can scrape out the most diseased tissue, down to the healthy spongiosa, but this is impossible with a tuberculous degenerated synovial membrane An abscess membrane, easily detached from healthy tissue, does not exist in this case, and the tuberculous granulations here infiltrate the fibrous layers of the capsule Thus it is that after the use of the sharp spoon recurrences easily exist, when the synovialis was severely affected In using the sharp spoon the

operation should be bloodless and done with large incisions, which permit a complete view of the field of operation, then follow the operation with careful antiseptic disinfection and after treatment

25 Tuberculosis of bones without affection of the large joints is represented clinically by the following forms of disease

a *Spina ventosa* (Padarthrocace) ampullaceous thickenings of the phalanges of the fingers and toes, sometimes of the metacarpal and metatarsal bones, exceptionally of the ulna and radius, or even of the tibia and femur usually multiple, and depending on a tuberculous osteomyelitis The affections is seen only in children, in their early years, and gets so completely well, in spite of its multiplicity, often without breaking, suppuration or the formation of sequestra, that no deviation in the shape or growth of the affected bone remains afterwards

b Tuberculous suppuration and necrosis of the orbital portion of the superior maxilla, with the subsequent characteristic ectropion of the lower lids, also affecting young children by preference

c Cold (tuberculous) abscesses of the skull, developing from small tuberculous necrosis of the skull, and generally penetrating into the cavity of the skull Most in grown people

d Tuberculous caries of the ribs

e The common form of spondylitis (Pott's hump) This affection, contrary to the traditions of the text books, should be classed with tuberculous joint inflammations, as here, after the early destruction of one or more intervertebral cartilages, the same unfavorable factors come into play as in the joints, the mobility of the separate segments against one another, the weight of the body, the progressive destruction of the inflamed parts of bone pressing against one another, and the mutual infection of the same It is to be remembered that tuberculosis of the bones in grown people almost never affects the shaft of the long bones, and therefore ostitis and periostitis developing here must generally be attributed to other causes (syphilis, chronic form of infectious osteomyelitis)

26 Even the largest abscesses, originating from tuberculous bones and joints, may be freely incised without danger, provided this be done under strictest antiseptic precautions and the after treatment be strictly antiseptic *Early opening of these abscesses is desirable* —*Langenbeck's Archiv*, Bd 33, Hft 1

FLUID EXTRACT OF PICHI IN VESICAL CATARRH —DR H S DELAMERE, of Lubec, Me, referring to the use of pichi in the treatment of catarrh of the bladder, relates the following case

"A B, æt 28, had been suffering for two years from vesical catarrh He had had gonorrhœa, but a No 21 (French) bougie passed without difficulty, causing, however, considerable vesical tenesmus When I was called to see him he was passing urine every hour during the day and four or five times during the night The urine was alkaline, ropy, ammoniacal, and the microscope revealed pus I gave the usual remedies prescribed in country practice, such as buchu, uva ursi, etc, but without benefit I then resorted to washing out the bladder by means of the double channel catheter, with the effect of relieving my patient slightly The least exposure, however, aggravated the symptoms and caused as much suffering as ever After about a year and a half of constant treatment, with no other result than to keep the disease at bay, I received a sample bottle of fluid extract of pichi, which I tried After the patient had taken it a few days he expressed himself as feeling better He was now getting up twice during the night But the sample was gone, and I was obliged to wait until I could get a fresh supply In the meantime the patient grew worse, had to get up three or four times during the night As soon as the drug arrived I commenced giving him 20 drops four times a day, which dose I increased to 30 drops In a few weeks my patient was so much better that I abandoned washing out the bladder, and to day he is at work The urine is clear, free from mucus and has no ammoniacal odor He sleeps well, and does not have to get up more than once during the night Notwithstanding he has suffered recently from a severe cold, the bladder trouble has not returned The man's general appearance is healthy, appetite good, and he seems well —*The Medical Record*, November 12, 1887

ANTIDOTES TO STRYCHNINE, RESORCINE AND PICROTOXINE —PROFESSOR ANREP[1] has proven experimentally that urethane possesses properties antagonistic to the convulsive drugs, such as strychnine, etc, and believes that urethane may be employed in cases of poisoning by these substances It is superior for these purposes to hydrate of chloral, it is less dangerous, and may be administered in large doses with perfect safety The author concludes that, in the case of man, it is necessary to administer it in doses of 4 to 6 grams as an antidote to the poisons above mentioned

E KOCH[2] states that butychloral hydrate is useless as an antidote in cases of strychnine poisoning, in picrotoxine poisoning, it fails to overcome three times the minimum fatal dose, behaving in this respect like chloral hydrate Picrotoxine may be successfully used as an antidote to the narcotic effects of butychloral hydrate and chloral hydrate According to A BOCKAL[3] paraldehyde is a powerful antidote to strychnine Ten times the fatal dose of strychnine may be safely administered to dogs that have previously received paraldehyde Strychnine is not, however, an antidote to paraldehyde —*Boston Med and Surg Journal*, November 10, 1887

THE PTYALISM OF PREGNANCY —DR JUSTUS SCHRAMM, of Dresden, describes in the *Berliner Klinische Wochenschrift* the case of a woman, æt 24, subject for a year and a half to debility, emaciation, and a feeling of pressure in the region of the stomach She was highly emaciated and very anæmic, with red, swollen gums There was also free salivation, two pints of saliva being collected in

[1] Journal de Pharmacie et de Chimie May 1887, p 505
[2] Chemisches Centralblatt 1886 p 811
[3] Ibid 1886 p 622

twenty four hours Chronic mercurialism was suspected, and iodide of potassium was accordingly prescribed, with but trifling benefit Atropine was then given, with like unsatisfactory results After nine weeks' treatment, it was found that she was at about the sixth month of pregnancy The sympathetic was galvanized The daily secretion had fallen to about 1¼ pint Pilocarpin injections were also tried, the subjective troubles were then relieved, but the secretion of saliva remained the same Lastly, Dr Schramm administered to the patient three times daily a 1 in 25 aqueous solution of bromide of potassium Henceforth there was steady improvement, the flow of saliva gradually ceased Labor was natural The progressive emaciation in this case might at first appear due to the great drain of organic and inorganic material from the system, but the solid constituents of the saliva were markedly scanty, and the loss of water could be readily compensated Dr Schramm found that, above all, ptyalin was absent from the saliva, the abnormal composition of which rendered it useless for the discharge of its important digestive functions —*British Medical Journal*, November 5, 1887

COLCHICUM IN GOUT —Whether colchicum should or should not be administered is often a question of debate DR CARTER, of Birmingham, gives his own conclusions in the current number of the *Birmingham Medical Review* He believes that this drug should be avoided in all cases attended with debility and cardiac feebleness, and that its use should be limited to early attacks of a sthenic type, and when the pulse is one of high tension From the liability of colchicum to depress the system and to interfere with renal elimination, its administration should not be continued for a longer period than is absolutely necessary for the relief of pain In order to prevent the employment of a larger quantity than is necessary for this purpose, it is desirable to give the drug in moderate doses, repeated at short intervals, rather than in a large single dose He argues that there is no evidence of the curative influence of colchicum, and thinks, with many others, that, in spite of the relief afforded, it tends to favor recurrence, and that it is safer to avoid its use altogetner if this is possible We are disposed to admit the general soundness of these views, but the evidence in favor of colchicum promoting the development of gout is not entirely satisfactory Dr Carter's observations on colchicum as a vascular depressant are rational, and he has found that such dilators of arterioles as nitrite of amyl, nitro glycerin and nitrite of sodium are scarcely inferior to colchicum in affording relief to gouty inflammations Veratria, a powerful vascular depressant, is a principal constituent in a well-known nostrum for gout Besides filling the cutaneous arterioles and swelling the skin, which actively perspires, with lowering of the general blood-pressure, colchicum diminishes the function of the sensory nerves, and may in this way tend to relieve pain, the sweating may also aid elimination, and relieve the kidneys from some of their work —*The Lancet*, October 29, 1887

CYANOSIS CAUSED BY ANTIFEBRIN —Among the points pertaining to the physiological action of antifebrin BONAI discusses this He concludes that the cyanosis which is produced in rabbits by fatal doses results from a disturbance of circulation, that in part it is due to the paralyzing action of the antifebrin upon the motor nerve endings in the muscles, and in part to a similar effect upon the respiratory centres in the medulla He does not think that it depends upon the formation of methæmoglobin, since this substance cannot he found in the blood of the rabbit In dogs similarly poisoned it can be found and in part, undoubtedly, is accountable for the cyanosis in them Upon the brain antifebrin does not seem to act, although it does have a paralyzing influence upon the sensitive elements of the spinal cord Bonai accounts for the antipyretic effects of the substance by its power of lessening the production of heat, and to this the presence of methæmoglobin contributes, since a part of the blood is no longer capable of taking up oxygen or transporting it —*Centralblatt für klin Med*, 1887, No 43

TREATMENT OF THE THIRD STAGE OF LABOR —FREUND, of Strassburg, gives his conclusions regarding this subject as follows In normal cases a judicious combination of the expectant and active method in treating the placenta and membranes is best In removing the placenta the accoucheur should wait until the first signs of spontaneous expulsion appear In cases where the placenta must be removed at once Credé's method of expulsion is the best Freund has observed, in normal cases, that the uterus rises toward the umbilicus when it expels the child He imitates, with one or both hands, this action in securing the expulsion of the placenta by gently pushing the uterus upward, and at the same time compressing it —*Deutsche medicinische Wochenschrift*, October 27, 1887

INFLUENCE OF POTASSIUM IODIDE UPON THE ELIMINATION OF MERCURY —According to DR SOUCHOW the elimination of mercury commences later, and the quantity eliminated is relatively less in those cases in which the patient takes potassium iodide in conjunction with the mercurial preparation If the iodide is administered during or after the mercurial course, the quantity of mercury eliminated daily is lessened The iodide, therefore, appears to prevent the elimination of mercury, instead of hastening it, as has been believed by some, and would seem to be useless in cases of mercurial poisoning —*Boston Med and Surg Journal*, November 10, 1887

SYNCOPE FROM SYRINGING THE EAR —MR J MIDDLEMASS HUNT reports the case of a boy, æt 3 years, whom he found in profound coma, with slow, irregular respiration, rapid pulse, and dilated pupils, a condition which came on immediately after his ear was syringed for a purulent discharge Mustard was applied to the nape of the neck and consciousness returned in a few minutes The membrana tympani was extensively destroyed, but there were no signs of caries Roosa records a similar case in the *Archives of Ophthalmology*, vol ix, p 19 —*Lancet* Oct 15, 1887

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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INJURIES TO THE FŒTUS DURING LABOR

The exhaustive article on this subject, by PROFESSOR PARVIN, which is published in this issue of THE JOURNAL, will, we are sure, be read and studied with the greatest interest And while it would be superfluous to go over, in this place, the points he has so ably presented, it may be interesting to notice some points brought out in the discussion following the reading of his paper, a discussion that must be regarded as a timely opening up of a very important and interesting subject, and participated in by Drs W T Lusk, W Goodell, Wharton Sinkler, C B Nancrede, H C Wood, and others

In regard to fractures of the skull occurring in spontaneous deliveries, DR LUSK mentioned a case reported by Veit, in which the patient received large doses of ergot The child was born with the right parietal bone separated from its fellow, from the occipital, and to a great extent from the frontal bone, the parietal itself being fractured in two places Dr Lusk raises the question whether the cases of spontaneous fracture reported many years ago were due to the absence of "this certainly most unreliable drug"—ergot He seems inclined to think that in some cases of depression of the skull it might be good practice to trephine, and elevate the depressed bone With regard to delivery of an after coming head retained by tonic retraction of the uterus, it must be remembered that great traction force—and certainly less than 160 pounds in most cases—will almost surely tear the cervical tissues If the head be retained at the brim of the pelvis, it is almost a matter of certainty, he thinks, that the child will be stillborn when the necessity for that amount of force exists, "it is a question whether we should ever use much force in pulling on the child, whether, indeed, the head cannot be better shoved through the pelvis by supra pubic pressure, in the manner described by Dr Goodell and Dr Taylor" But Dr Goodell, in discussing the paper, said With regard to head last labors, I have tried to deliver the breech by the use of the forceps on the buttocks, and have succeeded with them, but they are liable to slip off I therefore always bring a leg down in breech cases, and then I have command of the situation The force of traction which the neck will bear is uncertain, and doubtless varies greatly, but I believe that the man who, in trying to save the child, breaks the most necks, saves the most children, and I respect him accordingly Such labors are always very dangerous to the child, the percentage of deaths is a very large one I look on a child in breech presentation as a child drowning, to which help must be sped—help at all hazards It is emphatically a case of "neck or nothing," and we must not sacrifice the life of the child to any sentimental considerations about breaking its neck

A point emphasized by Dr Lusk is that when the blades of the forceps cannot be applied to the sides of the head, they should be applied in the oblique diameter, otherwise, the blades may press directly on the forehead and occiput, and the pressure will ultimately affect the medulla, destroy the respiratory sense, and kill the child It is especially in the flattened pelvis that this may occur, or that the pressure of the forceps may dislocate the occipital bone In labor cases in which the arms become extended above the head—a thing that should not occur in a well conducted labor—he thinks that the accoucheur is justified in breaking the arm to effect delivery It is not always possible to follow the directions of obstetricians, to draw on the elbow and push the arm over the face, in time to extract the child alive And in breech cases, in which the arm is bent around the neck of the child, it is almost impossible to extract the arm without fracture "Then why not fracture the arm?" The physician is not responsible if the arm be broken in his efforts to release the member, "but he is responsible for the displacement of the arm behind the head If he leaves the body alone and does not twist the trunk, the arm will not remain extended The child does not spontaneously flex its arm and place the forearm beneath the occiput" In cases of breech presentation, with both extremities reflected upwards, and when the breech has reached the floor of the pelvis, Dr Lusk still thinks that the application of the forceps is

easier than would be supposed, and that their use is less dangerous than that of the fingers or the blunt hook If the breech be brought down to the perineum and then allowed to recede, and this be continued till physiological softening of the pelvic floor and perineum takes place, only a moderate degree of force is required

Dr Wharton Sinkler's experience is that a very large proportion of the cases of paralysis met with in infants are due to instrumental or prolonged and difficult labors The most frequent form that we meet with is facial paralysis, either unilateral or bilateral This generally results from the pressure of the forceps upon the facial nerve or upon the mastoid process Facial paralysis may, however, result simply from the impaction of the child's head in the pelvis without the use of forceps Hemiplegias are often met with in the newly born as a result of the use of the forceps In regard to injuries to the sterno-cleido-mastoid muscle, he has seen cases in which the child has lost power in all the muscles of the neck so that it was unable to support the head Some of the cases have been delivered by the breech and considerable traction made Some have followed delivery by forceps, perhaps from pressure on the spinal accessory nerve, or perhaps from extravasation of blood In the case of paralysis following difficult or instrumental labors, the lesion is often an extravasation of blood over the motor convolutions, a meningeal hæmorrhage If the amount of the extravasation be great, the prognosis is, of course, bad, but in some of the cases, especially when there is monoplegia, when there is paralysis of one arm alone, the child entirely recovers the use of the limb, and in facial paralysis recovery, as a rule, occurs in a few days, but the condition may persist during life Dr H C Wood explained that we do not see hemiplegias and paraplegias due to injury during labor, in children of 5 or 6 years, simply because children so injured never live that long What we do see are the cases of spastic paralysis Spastic paralysis is the secondary effect of an early destructive lesion, the immediate evidences of which may have been entirely overlooked "In all such cases presenting at my clinic I inquire as to the history of the labor, and invariably find that it has been unusually severe or instrumental The brain at birth is so soft, so liable to injury, that while I would not have the obstetrician entirely discard the use of the forceps, I think he should never take them in his hand without bearing in mind the possibility that they will do serious permanent injury to the nerve centres of the child"

Dr Nancrede believes the treatment of the injuries of the soft parts is too often left to the nurse, who either does nothing, or does that which ought not to be done It has been recently shown that even the slightest injury of the scalp may end in periostitis, inflammation of the sinuses, meningitis, encephalitis, and often pyæmia The prompt carrying out of antiseptic precautions greatly reduces the mortality from such injuries Although in these cases certain forms of antiseptic dressing may be impossible, the principle of antisepsis is easily carried out in many ways The Lister dressing, or the application of any irritant or poisonous substance, is out of the question But we may use boric acid freely, and it has the special advantage of being a dry dressing "I would call attention to the fact that simple fracture of the skull is in itself of no consequence The injuries to be feared are those done at the same time to the adjacent tissues by the force which produces the fracture If I should ever see a case in which I was convinced that existing paralysis was due to depression, I might trephine The recently published statistics that seem to indicate that trephining under antiseptic precautions is entirely without danger, are not to be relied on, and while I am a thorough believer in antisepsis, I must call attention to the fact that as inflammation of the membranes or brain may occur from injury, without any break of the cutaneous surface whatever, you certainly may have the same after, and because of trephining, despite antisepsis Trephining cannot remove many of the conditions referred to by Dr Sinkler, which are the real sources of danger, such as effusion of blood upon the surface of the brain or in the arachnoid Fractures producing epileptic seizures, etc, later in life, are rough fractures where projecting spiculæ or rough edges impinge on the brain or membranes, and such fractures—except, perhaps, *very rarely*, projecting rough edges—cannot occur in the infant skull, which is *devoid of* an internal table, from the shattering of which, in fractures in adults, secondary nerve trouble results"

THE SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION

A meeting for the permanent organization of this Association was held in Birmingham, Alabama, on the 12th of October, 1887, pursuant to a call by the Alabama Surgical and Gynæcological Association, which had been prompted by requests from many prominent physicians in the Southern States asking the Alabama Association to so extend

its membership as to include members from all the Southern States The meeting was organized by the election of Dr H N Rosser, temporary Chairman, and Dr W E B Davis, Secretary A well considered Constitution and By-Laws were adopted The second, third, and fourth Articles of the Constitution are as follows

"ART II The object of this Association shall be to organize the profession of the South in the most efficient manner possible for the advancement of the sciences of surgery and gynecology

"ART III This Association shall adopt and conform to the Code of Ethics of the American Medical Association

"ART IV Any reputable physician, who practices surgery or gynecology, and who is vouched for by two members of the Association, and recommended by the Judicial Council, shall be eligible to membership in this body "

The following officers were elected for the ensuing year President, Dr W D Haggard, of Nashville, Tenn , Vice-Presidents, Drs R D Webb and J W Sears, of Birmingham, Ala., Secretary, Dr W E B Davis, and Treasurer, Dr H P Cochrane, both of Birmingham, Ala The Constitution provides for annual meetings, to be held on the second Tuesday in September at such places as may be designated from year to year The next annual meeting is to be held in Birmingham, Ala , commencing the second Tuesday in September, 1888 Dr W F Hyer, of Holly Springs, was elected Orator If the object of this new movement as declared in the second article of the Constitution shall be faithfully adhered to, as it doubtless will be, it will contribute much to advance both the social and scientific interests of the profession in the Southern part of our country The association of surgery and gynecology in one Association can hardly be considered inappropriate, since the gynecology of to day takes cognizance of little else than surgical procedures of some kind

NEW YORK HARBOR AND QUARANTINE FREE FROM CHOLERA

Such was the announcement when a few days since the last of the passengers of the Alesia, who had been detained several weeks in quarantine, were landed at Castle Garden in good sanitary condition As the disease is rapidly diminishing in Italy and Mediterranean ports on the approach of the cold season, there is less probability of having more cases brought to our ports on shipboard during the next three or four months, but the danger of importing infected cloth ing or goods either directly or indirectly from places where the disease has been prevailing is not materially lessened And the fact that such baggage may belong to passengers in good health, adds to the danger that it may escape detection by the health officers and be permitted to be carried to any part of the country From the report of the Committee appointed by the Philadelphia College of Physicians, and from other sources, we think the system of inspection, detention and isolation of the sick at New York is more nearly complete, and affords a greater degree of protection from the introduction of contagious and infectious diseases than is afforded by the quarantine arrangements of any of our other important seaports In one important respect, however, the system of New York, or rather the accomodations for rendering it most efficient, is defective It is the failure to provide on the Island for detention of passengers from infected ships, a sufficient number of entirely separate cottages or barracks to permit the passengers to be accommodated in small groups The detention of passengers who are well, after they and their baggage have been subjected to thorough cleanliness and disinfection, can be justified only on the supposition that they may have the infection already in their blood undergoing the incubative stage, and hence they should be held until the known period of incubation has passed But if all the passengers are detained in one company, and only one case of the disease develops among them at the end of the period of incubation, whether it be seven, nine or fourteen days, the whole company are exposed again and must be detained during another period of incubation, and so on While if the passengers had been from the first kept in small isolated groups, all the groups except the one in which the single case developed, could have been safely discharged at the end of the first period of incubation Hence the practice of keeping all the passengers from an infected ship quarantined in one company, whether they number fifty or five hundred and thereby exposed anew to every new case that develops among them, is both unneccessarily expensive and unjust

THE TENTH INTERNATIONAL MEDICAL CONGRESS IN BERLIN, 1890

Soon after the adjournment of the recent International Medical Congress in Washington, the action of that body in recommending Berlin as the place, and 1890 as the time, for holding the next International Medical Congress, was officially communicated

to Professors Virchow, von Bergmann and Waldeyer, of that city Through Dr A Martin, of Berlin, the reception of the communication has been acknowledged, and assurances given that they cordially accept the proposition to hold the Tenth International Medical Congress as proposed The letter of Dr Martin, addressed to Secretary General Hamilton, gives assurance that so soon as the necessary preliminary conferences can be held, an official communication will be sent This we shall take much pleasure in publishing as soon as it is received, and the columns of THE JOURNAL will be used freely for the promotion of the interests and success of the Congress to be held in Berlin, 1890

INFLUENCE OF OCCUPATIONS ON MORTALITY —The English Registrar-General has recently given the results of a comparison of the death rate in classes following different occupations in England, that are worthy of serious consideration Assuming the average death rate for the whole population to be 1,000, the comparison shows the lowest death rate to be with ministers of religion, 556, gardeners and nurserymen, 599, and farmers and graziers, 631 On the contrary, the highest death rate was with those directly connected with the liquor traffic and hotel service, 2,205, the general laborers in London, 2,020, the innkeepers, 1,521, and the brewers, 1,361

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, May 25, 1887

THE PRESIDENT, JOS TABER JOHNSON, M D, IN THE CHAIR

DR J FORD THOMPSON showed the specimen and gave the history of a case of

TAIT'S OPERATION

The patient was under the care of Dr Freidrich and was seen by him in Nov, 1886 She was the mother of 9 children and had had besides 3 abortions She has suffered intensely since her last abortion two years ago The pain was mostly in the left side She had been operated upon for a lacerated cervix some time ago by Dr J T Johnson She was having convulsions of an hysterical nature whether from the ovarian trouble or not it was difficult to determine for the history of their occurrence extended back to before her marriage The convulsions would occur while she was being examined Several consultations were held and it was agreed by all who saw her that a removal of the uterine appendages was the only chance of curing her Her husband and herself being perfectly willing, the abdomen was opened Dec 6, 1886 The uterus was found to be retroverted, the left Fallopian tube was enlarged, which together with the retroverted uterus prevented his reaching the ovary on that side After a consultation with those present it was decided not to proceed further, so the wound was closed The right ovary could have been removed with ease but here frained from doing this because it would not make a complete operation and there was apparently nothing the matter with that ovary The woman recovered from the operation all right, and remained well for a month when the symptoms returned with renewed violence

The husband and patient ardently urged another operation, and, Dr Taber Johnson having been called in consultation, it was considered justifiable The second operation was undertaken with reluctance as the difficulties were known in advance The incision was made in the line of the first one, and he was, on getting through the peritoneum, embarrassed by what seemed to be intestine adherent to the wound It proved to be omentum and was easily got rid of The retroverted uterus was tipped forward by one of the assistants and the left-ovary was at last reached It proved not to be enlarged, as might have been expected, but very firmly adherent Starting, therefore, at the uterine end of the tube he passed two ligatures around it and cut between them A little more of the tube was then taken up in the same way He now turned to the right ovary which was found to be enlarged and somewhat adherent The adhesions were broken down and the ovary and tube removed He now went back to the left ovary and after much difficulty succeeded in shelling it out of its bed and removing it There was but little hæmorrhage in spite of the lacerations on the left side The wound was closed by silkworm gut and quickly healed by first intention

About a week after the operation he detected fluctuation on the right side and there was intense pain over this region A few days after this there was meteorism and slight tumor in the right inguinal region He cut down upon the tumor and evacuated a large quantity of pus from a pelvic abscess He washed out the cavity and inserted a drainage tube, and the patient is now well

The left ovary might possibly have been removed as usual but taking it out in sections seemed to have made no difference in the result The case was an extremely bad one from the outset but she has now recovered from the operation and he hopes to have cured her

DR JOS TABER JOHNSON reported

FOUR CASES OF REMOVAL OF UTERINE APPENDAGES

Case 1 —Miss B, æt 26, began to complain of pain in left side and abdomen in the Spring of 1874 Had also a hacking cough which greatly aggravated the pain She was treated for asthma, rheumatism, neuralgia and diabetes, without benefit In 1880 consulted another physician who diagnosed a retroversion of the uterus aggravated by long inattention, but curable This history is given from a written

statement made to me by the patient and I continue, using her own words "I was treated for this retroversion and cough for three years, and at the end of this period not being satisfied with my progress, consulted another physician The most distressing feature of my condition was the neuralgic attacks, as they were called, but are now said by Dr Johnson to be recurrent attacks of pelvic peritonitis Beginning sometimes with nausea, oftener with a beating pain at the base of the spine which gradually increased until it came in surges, enveloping the entire abdomen and stomach, lasting generally an hour and in effect several days These attacks invariably followed any variation in the simple life I was at that time obliged to lead Dr S abandoned the pessary and in addition to local treatment, attempted to build up the system by tonics, etc This plan entirely failed, and in the Summer of 1883 (being North as usual), occurred the most violent of these attacks above alluded to, which was a four weeks' siege During 1883 and 1884 I had a number, more or less violent In the winter of 1884, while in Boston, I consulted Dr B, and under his advice commenced the use of hot soft baths and douches to remove an adhesion which he said existed After sixteen months trial of these baths and iodine and the intermittent use of the pessary, I returned to Washington very little benefited Under the treatment of Dr Jos Taber Johnson I was enabled to do without the pessary for some time, but still suffered when I walked or took any exercise from my chronic ovarian inflammation as he called it By his advice electricity was tried about twice a week, administered by Dr Cuthbert, for a year, but no permanent relief was obtained Dr Busey was called in consultation and after listening to my history said that as about every thing which he would suggest had been already faithfully tried, he had only two suggestions to make, one that I remain in bed for a year and the other was that the ovaries be removed As I had been practically at rest for the past three years, that course did not promise much Dr J had already talked of the operation, and after thinking the matter over and talking with my family and friends about it, and after having a full explanation of its effects and possibilities I concluded to have it done"

Miss B entered the hospital March 6, 1887, and her ovaries and tubes were removed on the following day, in the presence of Drs Cutts, Cuthbert, S S Adams and the house physician Not much trouble was experienced in the operation and the patient made a rapid and perfect recovery She has had no menses or pain in the abdomen since and is perfectly satisfied and happy over the results She still has her asthma, and when she walks or stands too long has symptoms produced by her retroverted uterus and pressure on the rectum, but these are gradually disappearing I am doing nothing for her, expecting the atrophy which accompanies the change of life to finally relieve her uterine symptoms In answer to a note inquiring her present condition for the purpose of adding to the history of her case, I received, yesterday, the following reply

"Monday, May 23, 1887 My dear Doctor I am more and more thankful that I had the operation done, and will not have to drag out my days in endless pain and misery. I have been entirely free from the old pain and as soon as I can regain my strength I expect to be unusually strong and well This I am slowly, but surely, doing Sincerely, etc Lilla B"

Case 2—Mrs B, æt —, married, children With in the last — years has been greatly troubled by profuse menstruation, which at times amounted to fearful hæmorrhages I was requested to see her by her physician, Dr C W Franzoni He had already discovered a uterine fibroid which he thought was the cause of the loss of blood Upon several occasions she was greatly reduced by the flow, and hardly recovered from its effects before another one came Twice it was feared that she might bleed to death before the hæmorrhage could be arrested After a careful examination and deliberate consultation it was agreed that Tait's operation for the relief of bleeding uterine myomata offered the best prospect, and it was therefore recommended after a course of treatment with ergot The husband and wife readily agreed to take the risks, which were fully explained to them Mrs B entered a private room at Providence Hospital on the 13th of February last, and the operation was performed two days later, in the presence of Drs Franzoni, Cutts, Cuthbert, Crook and the house physician She made a good recovery and has had no loss of blood since the operation She is now well and hearty, and attends to household matters as well as she did before the growth of the tumor

Case 3—Mrs H, from Georgia, æt 30, married for fifteen years, no children, has been a sufferer from pain and hæmorrhages for the past seven years She was for some time under the care of Dr Robert Battey, of Rome, Ga, and became an inmate of his Infirmary for the purpose of having her ovaries removed to cure the fibroid enlargement of her uterus, which was diagnosed to be the cause of the hæmorrhages Just before the time fixed for the operation Dr Battey was unfortunately taken sick, and as the date of his recovery was doubtful, and she had gotten her courage up to the point of an immediate operation, she determined to come North and have it done before her next period should set in and exhaust her again by such a dreadful loss of blood as occurred every month Indeed, she and her two sisters, who came with her, feared she would not survive another period

Upon examination I found a fibroid tumor reaching nearly to the umbilicus It fortunately did not press upon the rectum, though it greatly interfered with the bladder She was very nervous and especially feared meeting with strangers She was entirely satisfied with Dr Battey's diagnosis, and as I perfectly agreed with him in the propriety and necessity of removal of the uterine appendages as a means of cure, she and her sisters declined any further consultation As soon, therefore, as she was rested from her journey, and five days before she expected her next period, I removed her ovaries and tubes in the presence and with the assistance of Drs Cutts, Cuthbert and the house physician, Dr Luce

A large vascular fibroid growth lay directly under the abdominal incision It was turned somewhat sidewise, bringing the left ovary and tube very easily within reach It was drawn out of the wound, and with the Fallopian tube removed without any difficulty The ovary was enlarged to double its natural size and in one extremity was a hæmatoma which ruptured in my fingers The other ovary was far down under the tumor, and it was with the greatest difficulty brought up sufficiently to enable us to get a ligature under it I feared to draw too strongly on the very vascular looking tumor, having in mind several experiences of Dr Keith where, under similar circumstances, he had accidentally torn the covering of the tumor and set up hæmorrhage requiring the performance of hysterectomy to control it I transfixed and ligated under the ovary, but could not remove the entire organ without endangering my ligatures The cautery was, however, very thoroughly applied to the stump, thus destroying, it was thought, any of the ovarian stroma left behind

The patient has made a good recovery It is now three weeks since the operation, and no menstrual flow has made its appearance, though one was due and expected five days after the removal of the appendages

In the last two cases the ovaries and tubes were removed solely for the purpose of arresting the growth of uterine myomata and their accompanying hæmorrhages, and without the slightest purpose or thought that they were themselves diseased Experience has amply demonstrated the value of this mode of treatment of small uterine myomata When these tumors are very large, say from 15 to 50 lbs, ergot, electricity or hysterectomy, in the order mentioned, offer better prospects of a cure

Case 4 — Miss B, æt 23, single, began to menstruate in 1879, when she was 13½ years old Has from the first suffered with much pain and has always been irregular Pain in back, hips, limbs, head and neck and nausea which for years has prevented her from taking sufficient food Pain at first in left ovary, but of late years worse in right, especially during her periods, formerly attended with slight convulsions Has never been able to take violent exercise, such as running, dancing, jumping, etc, without producing severe pain in her side, sometimes the left, at others the right, with headache Of late years could not attend church, go in company, or stand any excitement, so that life gradually became a burden with scarcely any pleasure in it Had typhoid fever in 1882, and two and one half years elapsed before her periods returned again During this time she frequently had convulsions, just about the time for the regular flow, but with no sign of a flow She says in her written statement to me "The convulsions generally lasted two or three hours, and I was generally very sick for two or three days afterwards Since the return of the menses they have been more painful than ever For the past year and a half I have not been able to walk three squares, cannot sweep, dust, or go up and down stairs or lift any ordinary weight, or stand on my feet for any length of time, without it producing pain in my back and in the lower part of the abdomen, generally worse on the right side, and intense bearing-down feelings Any exertion of the arms produces severe pains in the back of the head and neck, this pain is much worse during the monthly periods I am so nervous all the time that any excitement, fright, sudden joy, or any sudden noise will make me start, and sometimes produce a nervous chill lasting fifteen or twenty minutes The monthly flow is generally attended by intense itching and burning and great soreness of the parts I have used the hot water injections for years, but I found it was not benefiting me any, so I gave it up Have been treated for falling of the womb, used cotton supports and pessaries, but they did me more hurt than good Have had a dry hacking cough and palpitation of the heart"

Dr Little brought this lady to me about four months ago After hearing her history of pain and suffering for some years, I suggested the removal of the uterine appendages as the only rational mode of treatment This was opposed, and I have treated her with various applications, iodine blisters, tonics, feeding and electricity I did her no good for three months, and then declined to treat her further, repeating my first advice I saw nothing else to do, but advised her to seek other advice and return to me in six months, if no better In about one month she returned Both she and her family requested to have the operation performed Its risks and effects were fully explained She took a private room at Providence Hospital, and I removed her appendages last Monday at 10 A M, in the presence of Drs Cutts, Cuthbert, Little and Luce

The uterus was a good specimen of what is called the infantile uterus The ovaries were adherent, one was difficult to remove on this account, and was enlarged and contained cysts They both appear to be in a state of chronic inflammation The patient is doing fairly well so far Her pulse has been too rapid since the operation, but she shows no evidence yet of peritonitis I expect she will recover and be cured

DR JOHNSON also reported a case of

CÆSAREAN SECTION, DEATH ON TENTH DAY

I was summoned by Dr J W Bayne early on the morning of April 5th to perform Cæsarean section upon a colored woman who had already been more than two days in labor I made the necessary preparation and went to the residence on New Jersey avenue, about four squares southeast of the Capitol We found her in a little hut nearly if not quite fifteen feet below the level of the street The place was devoid of anything which might properly be called furniture, but was thoroughly filled with smoke from a rickety old stove, and bad smells There were from six to ten colored women, and a few men and boys, standing about, and with the four doctors who had been in attendance during the night, and myself, we made a curious and anxious audience of a dark and tragic scene

The following is a history of the case Mrs J, colored, age uncertain, but said by her mother to have been born ten years "fo' de wah," and the

mother of six children, had been unusually weak troubled with a cough during the last three months of her pregnancy Was taken in labor two days before and sent for Dr Chew, after pains had been going on for some time He found the head of the child in the left iliac fossa, but it had not and could not be made to properly engage After much waiting forceps were applied, they repeatedly slipped off, and Dr Chew then called to his assistance Drs Mallen, Dunn and Bayne During the night before I saw the patient she had been at one time under the influence of ether four hours, while prolonged and repeated efforts were made with the forceps Version also failed to dislodge the head, although one foot was drawn down and out of the vulva The head could not be pushed up by any of the gentlemen Dr Bayne finally performed craniotomy in the hope of so diminishing the size as to enable him to extract it Effort at delivery with the crotchet and blunt hook entirely failed When I saw her and learned that she was the mother of six children, and that craniotomy had already been performed upon this child, I expressed the belief that she could and ought to be delivered without Cæsarean section I was invited to try, and the patient was etherized and I did try, but the impaction was so great and the contractions of the uterus so continuous and powerful that I accomplished absolutely nothing All present were anxious that the child be immediately delivered, including the mother and husband, and I reluctantly consented to proceed with the operation

The surroundings could not have been worse, unless it had been in the night We made the best preparation we could An operating table was improvised by taking a door off its hinges and placing it across the backs of two chairs I made an antiseptic solution by using some of Wyeth's tablets of the bichloride, and with it washed the patient's abdomen I placed my instruments in a bowl of hot water The patient was as well protected with blankets as we could provide The urine was drawn off by Dr Mallan, and with Drs Chew, Bayne, Mallan and Dunn to assist, I began the incision just below the navel, and cut rapidly down upon the uterus, to within about two inches of the os pubis There was scarcely any hæmorrhage Dr Bayne skilfully compressed the walls of the abdomen against the uterus, thus preventing any escape of intestine, and at the same time preventing any fluids from the uterus entering the abdomen, and steadying the organ itself Expecting much loss of blood as I cut into the uterus, I hastened this part of the operation, and as soon as the child was visible extracted it and the placenta without any difficulty Dr Bayne at once compressed the fundus, completely preventing hæmorrhage from the placenta site I doubt if two ounces of blood were lost in the entire operation

The uterine cavity was sponged out with the bichloride solution, or rather the water was squeezed out of the sponge into it The muscular structure was brought together with eight interrupted carbolized silk sutures, thoroughly coaptating the cut surfaces Effort was made not to include the mucous coat, and as the post mortem shows, sufficient hold does not appear to have been secured by the last three stitches

After cleaning out the abdominal cavity, the incision in the walls was united by about fifteen sutures, and the wound was dressed with iodoform gauze, a firm compress and flannel bandage The operation was completed in about fifty minutes The patient was made as clean and comfortable as circumstances would permit She was placed in a large bed in which she had been wallowing about for the two previous days of her labor, and which had done duty for a large family for a long time, clean sheets and pads were loaned by the neighbors, and the bed filled with hot bottles, bricks and flat irons, to restore and retain warmth to her body Her pulse could not be counted the first twenty four hours after the operation, and she had a number of hypodermics of whiskey

I should have mentioned that when the abdomen was opened, we could all plainly see where the uterus had been bruised, and had turned very dark—almost black—where the head had been impacted so long, and the parts bruised and injured by the repeated efforts to press and push it out She rallied very well, and seemed free from pain, and after the first thirty six hours took a large quantity of liquid food Her pulse continued between 130 and 120 for several days, but her temperature remained at about 101° She seemed at one time to have a fair prospect of recovery, but the circumstances were all against her She had no nurse, was on a bed reeking with foul smells until Dr Chew and I bought and fitted up a cot upon which we lifted her We changed her clothing, washed and dressed her daily, begged linen and under clothing for her from our friends, washed out her vagina and uterus frequently I saw her twice daily, and Dr Chew six times daily, the last visit generally about midnight She could not have had more medical attention if she had been a millionaire Upon the evening of the 9th day her pulse began to fail, though her temperature was only 101° She lost her desire for food, and died at 10 A M on the 10th day after the operation

I asked Dr Lamb to make the post mortem She seems to have died from the effects of an abscess found below my incision in the uterus, which was probably the result of the bruising of the uterus in the vain effort to push the head out of the left iliac fossa where it was so long impacted, and also by the general nastiness of her environment

It may surprise members of the Society that the operation was necessary at all I was at first surprised myself, and declined to perform it until after I had failed to relieve the impaction with the woman thoroughly etherized I think if any objector had been with us, he would have agreed finally with us It might perhaps have given the woman a better chance if the bruised uterus had been removed altogether, according to the Porro method, but the gentlemen present all agreed upon the Caesarean section, and it was done Great care was taken to bring the serous surfaces into perfect apposition, and the post mortem shows it to be thoroughly united

Dr Parish, in the last number of the *American Journal of Obstetrics*, gives an account of a Porro-Muller operation, performed on account of impacted shoulder presentation There are some points of resemblance between his case and the one just narrated His patient had been several days in labor Several skilled obstetricians had failed after prolonged and repeated efforts to produce podalic version, the patient having been six or seven hours during the last day of her labor under ether There was an unrelieved impaction The uterus was so firmly compressing the body of the child that it was found after many trials by four good obstetricians to be practically impossible to turn and deliver it In his case, as in mine, Cæsarean section was agreed upon, all knowing the child to be dead, and it was deliberately chosen as the mode of delivery instead of embryotomy Dr Parish subsequently determined to remove the uterus on account of the damage which that organ had sustained His patient died in less than two days, mine lived ten days, and died finally, as I believe, of an abscess at the point where the greatest bruising had occurred I have an idea if the Porro operation had been performed, thus amputating the uterus below the injured point, and she could have been so circumstanced as to have had proper nursing and hygienic surroundings, she would have recovered

Dr R P Harris, in the discussion of Dr Parish's paper, remarked that "the Cæsarean operation has been performed in the United States in cases of impaction of the fœtus in a transverse position twelve times" In eleven cases the fœtus was dead, in two only of the twelve was the pelvis deformed, nine, or 75 per cent recovered, of the three lost one was ninety-six hours in labor, three days in charge of a midwife, another was twenty six hours under a midwife who had given ergot and ruptured the membranes, and the third had been long in labor, time not stated In these cases of impaction of the fœtus in transverse positions, we do not have presented to us the indication for the early Cæsarean section so eloquently pleaded for by Dr Harris, which is present in cases of pelvic deformity In these latter cases a knowledge of pelvimetry will demonstrate the impossibility of extracting even a craniotomized child through the natural passages, but in the former cases physicians are actuated to delay by the hope of being able to break up the impaction, and to finally deliver the child *per vias naturales*

It is rare that the uterine contractions become so constant and tetanic as not to relax and yield under the influence of prolonged anæsthesia

It becomes a nice point to decide, especially in women who have previously given birth to live children, in any given case of impaction when efforts with the forceps or by version should be suspended, and the Cæsarean section or the Porro operation proceeded with The 75 per cent of recoveries in cases of the Cæsarean section in the United States, for the relief of impaction in the transverse position, reported by Dr Harris, gives no great encouragement to study these cases more strictly, but it seems to me there will always remain great doubt when to suspend efforts at delivery through the natural passages and to perform the Cæsarean section or some of its alternatives

Mrs J , colored, died May 4, 1887 Necroscopy by Dr S S Lamb, abdomen only examined Track of incision in abdominal wall partially healed A delicate pseudo membranous layer united front of uterus to abdominal wall Some hyperæmia of peritoneum Pus in utero vesical pouch Lower three inches of anterior wall of uterus contained eight interrupted sutures (silk), around some of these suppuration was going on The uterine incision had healed except where the lower sutures had failed to include the entire thickness of wall Internally the uterine surface was red, green and blue, and soft, towards the vaginal end were two pus pockets and uterine surface was gangrenous Vagina showed sloughing ulcers

DR BUSEY asked Dr Johnson why he could not turn, in the case upon which he did Cæsarean section, and also if any ergot had been given?

DR JOHNSON replied that he attempted to turn, but could only get his hand up a little way when it came to a full stop The case had been in the hands of a midwife for two days before she was seen by a doctor, and he does not know whether ergot had been given or not

DR BUSEY remarked that in one of the histories read by Dr Johnson and written by the patient, he is quoted by her as having advised her "either to remain in bed a year or submit to the operation" His recollection of the advice he gave differs from this statement He does not know why he should have advised her to have remained in bed a year, as he cannot conceive that it would do her a bit of good He agreed with Dr Johnson as to the advisability of the operation

DR JOHNSON thought that the patient had grounds for the belief in this way, in the course of the conversation, as he recollects it, Dr Busey told her that as everything had been done for her except lying in bed for a year, she might get some good from this treatment, but that other disorders would likely be engendered which would be nearly as bad as the present trouble

DR T C SMITH said that he did not criticise Dr Johnson's treatment by Cæsarean section, but he wanted to call attention to the fact, that this is the fourth operation of the kind done in this city, and that the mortality was 100 per cent The point is that there are cases which ultimately require Cæsarean section, but which do not appear to at first As in this case the woman had the best of treatment without success, and then Cæsarean section had to be resorted to The operation is unfortunately looked upon as a *dernier ressort* From what we know of this case now, it seems as if the woman would have had a better chance of recovery if the operation had been done earlier, but no doctor here would have done it then The bruising of the uterus which is present might have been avoided by an earlier operation As it was the woman would probably have died anyway

DR J FORD THOMPSON said that he wanted to say a few words in regard to the technique of Dr Johnson's operation If he operated as he described it the Saenger method was not followed exactly For instance, no temporary ligature around the neck of the uterus was used This is a very important step, as without it hæmorrhage on removing the placenta is very probable, while with it, the subsequent steps can be done leisurely The serous surface under the sutures, also looks as if it was healed, but it is not united by Saenger's method of suturing It is the safest, first to use a line of buried stitches, and then put in the interrupted Czerny Lembert suture—which is the method now being used

DR JOHNSON remarked that Dr Thompson's criticisms were pertinent, and in the line of perfecting the operation There were two reasons why he did not apply the ligature One was, that he did not have one, and the other was, that the child having been dead for so long he did not expect much placental circulation There being some doubt as to the patient's getting off the table alive, the wound in the uterus was closed as quickly as possible If we could take the steps as deliberately as did Dr Tusk recently, there might be some chance of success (See THE JOURNAL, May 21, 1887) He agreed perfectly with Dr Thompson in the propriety of operating upon the case he has just reported, and he thought his prompt evacuation of the pelvic abscess probably saved her life The adhesions found were, he thought, a perfect explanation of her sufferings

Stated Meeting, September 23, 1887

THE PRESIDENT, DR JOSEPH TABER JOHNSON, IN THE CHAIR

DR T C SMITH presented and read the history of a case of

HYDATIDIFORM MOLE

(See page 686)

DR KING Such a valuable paper should not be passed without some comment In fact, so little is known of such growths that there is not much to say, and Dr Smith has covered the whole ground in his paper The history is the usual one of suspected abortion He had a case some years ago in which he diagnosticated hydatidiform pregnancy, and wished to empty the uterus, but the patient declined the operation, stating that Dr J H Thompson (Columbia Hospital) had wanted to do this three months before, but she would not allow it After three or four months she was attended by the late Dr Drinkard for the same trouble, which was at first considered to be an abortion

THE PRESIDENT said that there were several interesting points in the paper Recurrence is usual in such cases The fleshy moles deserve consideration The liability of the woman's character being affected should guard us in the diagnosis

DR KING Moles are of two kinds, true and false, the first occur with pregnancy, but the second do not If the mass be due to pregnancy, the chorial villi can be detected by the microscope after washing away coagulated blood clots in a basin of water False moles, having no connection with pregnancy, might be due to semi organized blood clots, polypoid and fibrous growths, and the desquamated membrane of membranous dysmenorrhœa This last could be diagnosticated by the membranous sac preventing three openings, those of the two Fallopian tubes and the internal os uteri The main point of differential diagnosis is the detection of chorial villi in true moles

SUFFOLK DISTRICT MEDICAL SOCIETY

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE

DR F I KNIGHT, CHAIRMAN

ALBERT N BLODGETT, M D, SECRETARY

Regular Meeting, Wednesday, October 12, 1887

DR W EVERETT SMITH read a paper on

A CASE OF POISONING FROM ARSENICAL WALL PAPER

About the middle of September, 1886, my patient, Mrs S, changed her residence from the country to the city She very soon discovered that some ferns in her parlors were withering, but not from neglect or improper care, since although ultimately dying, they revived for a brief season upon being removed to another part of the house In the early part of November, she suffered from an attack of nausea and a dizziness so intense, especially when she attempted to stoop, that for several days she was obliged to keep the bed These symptoms persisted in their intensity about a fortnight, and were followed by a sharp attack of facial neuralgia which lasted about a week In the latter part of December, the dizziness re appeared, but in a far milder form than it had been the month before At about the same time she began to complain of extreme lassitude and a loss of pleasure in pursuits that formerly gave enjoyment The quiet of her own room was the one thing that she eagerly sought

Although she suffered from a continual slight nausea, her appetite was unusually good, there was, as she expressed it, an almost constant "gnawing in the stomach" After the eating of food the nausea would increase, and she would complain of a feeling of heaviness and uneasiness throughout the bowels, especially in the umbilical region Her increase of adipose tissue began to be distressing to her Although she had always before drank very little water, she now was thirsty all the time The menstrual functions continued to be regular, so that the symptoms presented were considered to be indicative of over work and loss of nervous energy rather than of any physiological disturbance The patient herself was disposed to consider her symptoms malarial in their nature, although, contrary to her expectations, quinine gave her no relief Occasionally, she would speak of her eyes smarting and watering if she tried to use them

Suddenly, on March 16, 1887, she was taken with out any apparent cause with headache, extreme nausea, and uncontrollable vomiting The usual antiemetic remedies, internal and external, dietary and medicinal, were tried in turn, but all without relief On the contrary, they seemed rather to increase her distress The only expedient that gave the slightest resemblance of relief was the holding of pieces of ice in the mouth The vomiting was almost incessant, and was increased by assuming the recumbent position The vomitus consisted at first of mucus, on the third day of free blood, and later of thick yellow bile Tenderness in the epigastric and right hypochondriac regions speedly developed itself The temperature and pulse remained nearly normal The nasal discharge was uniformly bloody The menstrual functions still remained normal so that the symptoms seemed to indicate clearly an acute exacerbation of the same trouble that had existed all winter in a mild and chronic form Although I could not absolutely exclude either a primary gastroduodenal ulceration or some of the freaks of pregnancy, I remembered the withering of the ferns and began strongly to suspect some form of irritant poisoning to be the cause of sickness I accordingly sent samples of all the wall papers in the house (except, of course, plain "cartridge" papers which I knew to be practically free from suspicion) to Dr Edward S Wood for examination Upon analysis, he pronounced only one paper arsenical, but found such an amount of arsenic therein, that he advised its immediate removal

To settle decisively the question of poisoning, the urine also was examined for arsenic Six ounces collected on March 23, the eighth day of the incessant vomiting, yielded numerous crystals of arsenic after re-sublimation in the tube, while a quart of urine collected three days later yielded a very dark deposit upon the tube, but after re-sublimation, scarcely a trace of arsenic crystals This seemed to indicate not only that there had been a very large amount of arsenic in the system of my patient, but also that a rapid elimination of the poison was taking place But the vomiting and prostration continued unabated For twenty days the patient could retain absolutely nothing upon the stomach Enemata, both of beef tea and of Murdock's food were attempted, but could not be retained Finally, brandy was substituted for them and with better results The temperature had never risen above 100°, nor the pulse much above 96 At midnight of the twentieth day the nausea and vomiting ceased as suddenly as it had begun The following morning the patient expressed her first desire for food We began with Horlick's Food, and although during the next week we changed at her request to Mellen's, Hard's and to Wells and Richardson's Lactated Food, we returned to Horlick's and found it the best suited to the case The recovery was rapid and complete in less than a fortnight There was only one relapse that could be traced directly to arsenic

It had seemed at first improbable not only to myself, but to Drs Wood and Whittier, whom I consulted in the case, that the wall paper already found to contain arsenic could be the sole cause of all this arsenical poisoning The paper was upon the walls of a small room on the entrance floor of the house where the patient had been very little, the parlors were on the floor above, and her chamber on the floor above the parlors In hopes, therefore, of finding some other source of arsenic, dress goods and window draperies were analyzed, but with negative results, so far as finding arsenic were concerned Chromium was, however, found in large amounts in one pattern of dark-green dress goods I had early seen to it that all cretonnes and turkey red material were removed from the chamber, since they are well known to be highly charged with arsenic The almost conclusive proof, however, that the sole cause of my patient's sickness existed in this room is as follows The dangerous wall-paper was removed while the patient was convalescent She insisted that she was not yet strong enough to venture from home and so remained in the house, confined strictly to her room, while the work went on After the walls had been scraped and washed, and the room thoroughly cleaned preparatory to the laying of the new paper, she ventured to look into the room, but remained there scarcely ten minutes She very soon had a return of nausea and vomiting, which lasted nearly twenty four hours I thereupon insisted that she go into the country, and that in her absence the entire house be thoroughly cleaned and dusted This was done, and since her return she has presented no further symptoms of arsenic poisoning

Another member of the family was affected by the removal of the paper, his symptoms taking the form of a sharp diarrhœa The other two members did not at any time present marked symptoms of arsenical poisoning, except a noticeably sallow complexion and a pretty constant feeling of lassitude all winter They had, however, had more exercise in the open air than my patient

I trust the record of this case may stimulate physicians to investigate more thoroughly than they otherwise might, cases that they hastly assume to be the results of malaria, nervous prostration or other indefinite or undetermined causes Many of these cases I believe to be simply chronic poisoning from some material source near at hand The profession has learned that wall-paper and some kitchen utensils are often arsenical, and it is slowly realizing that articles of clothing and of household decoration may likewise be injurious to health, although the subject has not yet received the attention that it deserves It seems to me that it is our duty, as physicians interested in public health and preventive medicine, to make renewed and concerted efforts to secure such laws as shall make it a criminal offense for a manufacturer to allow any deadly poison to be in fabrics or materials that are used or that are sold upon the market

DR B F DAVENPORT said It may be of interest to the Society to know, in connection with this case, that the German government has, during the past summer, passed a new law, to go into effect next spring, in which the presence of two and one half

grains of arsenic per square yard is allowed in woven goods, provided it is in an insoluble (?) condition The presence of arsenic in any arsenical color is forbidden if the arsenic is present as a constituent part of the color, but if it is present simply as an impure material, the law forbidding its presence does not apply What the grounds for these limits of the new German law are I do not know, but presumably they are placed on some competent experiment

DR F I KNIGHT asked if that would modify the law in relation to the manufacture of colors also

DR DAVENPORT Yes The old German law, which is at present upon the statute books, forbids the presence of arsenic in toys and wall papers, but its enforcement has been suspended, and they allow the presence of arsenic in other things, provided they are to be exported They are not so particular about other nations as about their own That reminds one of the oleomargarine law in one of the western cities The dairy commissioner, reporting on the subject, said it was immediately gotten rid of by shipping into the neighboring States

DR ALBERT N BLODGETT said I would like to ask Dr Smith what degree of reliability is to be placed on the testimony of paper manufacturers or paper dealers as to the presence or absence of arsenic in their manufactured fabrics A short time ago in a discussion before this Section the statement was made that the certificates of chemists were often utterly valueless, that paper which was pronounced by competent chemists free from arsenic was found to contain large and dangerous amounts of it I would like to ask if Dr Smith has had any experience in the proving of certificates of the chemists of manufacturers in regard to the compounds of arsenic in paper, and what value he places upon them

DR SMITH When I was re papering my rooms, I was in some doubt as to what dealer to go to, Bumstead, or Gregory & Brown I went to the latter, and picked out papers that I thought I would like, and saw the analyses The papers were said to be free from arsenic I did not engage them to hang the paper, but engaged a wall decorator, he traded for the most part with another firm, the Boston Wall Paper Company They had a chemist of whom Dr Wood and Dr Harrington had never heard They had specimens which were said to be free from poison I finally purchased of Gregory & Brown Dr Harrington had marked one specimen "Practically free from arsenic" I went to Dr Harrington myself, because I wanted to know how much it contained I should place very little reliance upon the statements of any dealer in wall paper, because he is in one sense an interested, and in another sense an uninterested party He may sell arsenical wall paper in perfectly good faith He receives it from the producer, and takes the word of the chemist If it proves to be full of arsenic, of course if there were a law, he would be subject to penalty

When I was getting the paper, Dr Wood told me an experience that he passed through He changed the paper in his house while he was at the sea shore Dr Hill one day asked him what paper he was putting on the dining room He replied that it was from a lot which had been examined, as the dealer said, by Dr Hill himself Dr Hill was sure he had not seen it before, and on analyzing it, it was found to be a typical arsenical paper Mr Bumstead had the paper taken off at his own expense, and Dr Wood said the paper hanger had the most typical case of inflammation about the nails that he ever saw I think Bumstead although he has made some mistakes that were reported here last winter, has always acted fairly when he has found any paper that contained arsenic I am sure that Gregory & Brown are very careful

DR DAVENPORT said It is well to remember that the certificate of the chemist applies only to the particular sample examined It does not apply to another roll, whether of the same pattern or not Two rolls of the same pattern may be quite different One may be free, the other may contain a considerable amount of arsenic

DR SMITH The reason why I spoke as I did about the law was because Dr Wood said he had been at the State house, in relation to the matter, but has been rebuffed every time Testimony is brought forward to controvert his own If the law were passed, he would be cutting his own fingers, for he gets some income for analyzing the papers He has been one of the most strenuous in pushing the law at the State house I would like to ask Dr Davenport whether arsenic in wall paper does not exist for the main part as an impurity

DR DAVENPORT I presume it does Most wall paper in this vicinity is manufactured by the American Wall Paper Company They claim, and with reasonable evidence in favor of it, that they do not now use arsenical colors at all and do not intend to have arsenic in their paper I have understood that they had last year a thousand samples of paper, just as it came from the factory, analyzed, and they found that it contained arsenic on the average in some 66 per cent of samples

The stock from which the paper is made is largely clay, and this, as well as the ochre, may contain arsenic All papers with gilt contain arsenic, that is, practically all, because commercial copper is very seldom free from arsenic Of course the bronze contains copper and zinc Gilt from the American ore is generally free, but imported ore generally contains arsenic Then, as all chemicals are made more or less directly with the use of sulphuric acid, which is made from pyrites, it may come in that way And so, well nigh everything, unless it has been specially freed from it, would contain a trace of arsenic

DR SMITH said It seemed to me that the amount of arsenic which would thereby creep into the color would be very small, but I supposed that the arsenic was used as a mordant, and was not washed out

DR DAVENPORT As a mordant, quite a number of large cotton print mills use twenty tons of arsenic a month A common piece of print cloth may contain three, four or five grains of arsenic per yard

DR SMITH had been told last June that Mr Binney, employed by the Walpole company, made the strong assertion that arsenic had no business in the

chemistry of coloring material at the present time, that it was the lazy greediness of the manufacturers, who allow it to remain in their colors, that they do not take time to wash it out thoroughly

DR BUCK said There is one element of danger in papering rooms which does not often come up here We may have a paper perfectly free from arsenic, and still get arsenic poisoning A certain number of paper hangers put arsenic in their paste, and that gradually gets through the paper I would like to know if any one has seen differences in the number of cases reported in different seasons of the year In my experience, I have seen more cases in the summer than at any other time I have seen many paper box workers during the summer, and although I have had the dispensary work to do at other seasons of the year, I have not seen these patients during the winter or fall months They have presented themselves chiefly during the early summer I have thought that possibly it might have something to do with the heat, there being a greater degree of volatility at that season of the year

DR VICKERY Would paper containing two thirds of a grain to the yard be poisonous?

DR DAVENPORT Whether it would be poisonous is a question of dispute Some say yes, and some no Nobody knows

DR BLODGETT I would like to observe that the chemist of the Roxbury Carpet Works, in which nearly all of the various colors are employed, informed me that he never used arsenic, and that it was entirely unnecessary and out of place in the production of any color, and that it was perfectly possible to get all the advantages found in arsenic from other and safe means He expressed himself very strongly, and said that the presence of arsenic even as an impurity was unnecessary if proper care was employed in the selection of colors

DR SMITH added that a former occupant of the house where this patient lived had died from some obscure trouble, having had stomach and head symptoms She supposed it was the drainage, and the plumbers had been over the house again and again, but they pronounced everything in good order Perhaps the present case may give us some hint as to the cause of that sickness and death

DR PENGRA In what form is the arsenic set free from the wall papers? Is it in the form of gas or solid?

DR DAVENPORT I believe it is now commonly considered that the danger is from the dust which is removed from the surface and inhaled It was claimed at one time that there was danger of arseniuretted hydrogen being formed and inhaled as a gas I believe the latest experiments have shown that this gas is not formed except there is free arsenic present in the color In the case of Scheele's green or Paris green, each commonly contains a certain per cent of free arsenic, so that in the presence of moisture and fermentation, arseniuretted hydrogen may be formed In connection with those hearings which were carried on before the legislature, one of the gentlemen papered a large room with a heavy arsenical paper, and drew the air from the room through a solution which would take out the gas which would be formed I think it was carried on for some weeks without any result

DR PENGRA I would like to know whether the finish would not have something to do with it

DR DAVENPORT As I understand it, the danger is of the color being mechanically removed Of course if the finish is such as to prevent that, the danger is prevented A rough finish, I presume, is more likely to be loosely attached than the smooth polished surface There are a great many interesting questions arising from this Take a paper which contains a grain of arsenic per square yard Suppose that it covers a room larger than the average, so that we have sixteen rolls of paper Such a room would have something like sixty grains of arsenic on the wall It would take a good many years for the paper to fall off, and if one were in the room and inhaled all of it, it would be a very minute quantity It seems as if people were more affected by very minute doses than we are accustomed to see when we give it medicinally One writer says that it has a greater effect, but I do not know why

DR PENGRA said I would agree with Dr Davenport's statements that the arsenic would not become arseniuretted hydrogen, but the process of fermentation may produce that gas During the past four years I have seen students to the number of from one hundred to two hundred, working in a laboratory where the gas was generated every day, each student probably generating from six to ten volumes in a moderate sized room They did this during six to nine months of the year I have never seen a student suffering from anything like arsenic poisoning I have seen students suffering from the fumes of amyl alcohol and from sulphuretted hydrogen, but never has there been a case of arsenic poisoning among students who have been there two years

(To be concluded)

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK

(FROM OUR OWN CORRESPONDENT)

How Medical Men can Aid the Health Authorities

There has been nothing more encouraging for a long time in matters pertaining to public health in this city than the appearance, recently, of Dr Bryant, one of the Commissioners of the Metropolitan Board of Health, before the Academy of Medicine to ask for the cordial support and cooperation of the medical profession, and point out in a concise and emphatic manner the ways in which this end could be most satisfactorily secured This event was rightly regarded by some of the speakers who took part in the discussion on this occasion as inaugurating a new era in the sanitary history of New York As one of them, Dr Andrew H Smith, remarked, there have not in the past been those cordial relations between the profession and the Health Department that should have existed, and the latter has often

been regarded very much as an athlete who struck out from both shoulders, seeming to direct its blows on the one side against the public and on the other against the medical profession Dr Smith said that he had always believed the Board of Health should be the outcome of the profession and be in full sympathy, and that he could not but feel that Dr Bryant's address would be of great service in promoting the sentiment of a community of interests between the two When medical men could feel convinced that the Board was really a part of the profession, its usefulness would be greatly increased, and he had little doubt that, from this time forth, such would actually be the case

The subject of Dr Bryant's paper was, "How can the Profession Aid the Board of Health?" While there ought undoubtedly, he said, to be the most complete harmony between the two, and they should labor together, with common purposes, this had hitherto by no means always been the case, and they had, as a rule, been much greater strangers to each other than should have been the case He first gave a sketch of the organization of the Board under the recent head of the Department, General Shaler, in which there were seven divisions, all subject to a semi military system From a practical point of view, however, this system was found to be more ornamental than useful, and circumlocutory rather than thoroughly efficient

Dr Bryant then spoke of the present organization of the Board, and described the more important changes which had been introduced under the administration of President Bayles, who was present by special invitation and addressed the Academy later in the evening Among these changes was the relieving of the medical officers of the Board from the duty of making general inspections, and which is now performed by a corps of lay and police sanitary inspectors There are 45 members of the sanitary police corps, each having charge of the inspections in one of the 45 districts into which the city is divided, and it is their special duty to systematically and thoroughly inspect all the tenement houses in their respective districts The lay sanitary inspectors are 15 in number, one to each of the 15 larger districts into which the city is divided, and it is their duty to make inspections of buildings other than tenement houses, to investigate complaints made by citizens, and to deal with problems too deep for the sanitary police, by whom such problems are referred to them All the medical sanitary inspectors are now detailed to the department of contagious diseases, and it is their duty to at once visit the locality of any case of contagious disease reported to the Board, and see that proper measures for isolation, disinfection, etc, are promptly carried out When in any instance it is found that suitable medical treatment cannot be pursued, or that isolation of the patient cannot be secured, they advise that the case be removed to the hospital They are especially charged that they must cooperate in every way with the medical attendant in charge of the case, and are always to treat the latter in accordance with the recognized principles of professional etiquette

The medical inspectors, Dr Bryant said, were thus restricted to work that was entirely professional, and the most ample opportunities were afforded by the present system for the scientific investigation of disease In order to further this object promotion and the increase of salary are made dependent on faithful and intelligent service, and in addition, the services of Drs J M Prudden, of the College of Physicians and Surgeons, and H M Biggs, of Bellevue Hospital Medical College, had been secured as pathologists of the Board In the bureau of vaccination and contagious disease in animals expert diagnosticians have also been employed Convenient and comfortable means are provided for the transfer of patients to the hospitals of the Board, and the admirably constructed Willard Parker Hospital, at the foot of E Fifteenth St, is fitted up with all the modern appliances for the successful treatment of disease It has accommodations for 75 or 100 cases of diphtheria or scarlatina, an efficient house physician, well trained nurses, and a medical board consisting of such men as Drs E G Janeway, Joseph O'Dwyer, A Jacobi, Stephen Smith, George F Shrady and D M Stimson The Reception Hospital, near by, is also under the supervision of the same medical board On North Brother Island are the fine new small pox hospital and five pavilions, each with accommodations for 25 or 30 patients, for contagious diseases other than small pox

At the present time, Dr Bryant went on to say, the Board was paying special attention to the treatment of contagious diseases, and the urgent necessity for this was sufficiently attested by the fact that from the 1st of January to the 1st of September, 1887, there were no less than 1,575 deaths from diphtheria reported in the city There was entirely too much indifference on the part of the public to such affections as diphtheria, whose widespread ravages are continuous in the community, while a single case of a disease like cholera, the prevalence of which would seriously interfere with its business interests, would at once cause profound excitement and receive the greatest possible attention The Board had great odds to contend against, as it was estimated that from 15 to 25 per cent of the cases of contagious diseases occurring in the city were never reported by the medical attendants in charge of them It was estimated that from 25 to 30 per cent of the births were also unreported

At the conclusion of his paper Dr Bryant suggested the following ways in which the medical profession could aid the Board of Health in its work

1 By reporting at once all varieties of nuisances detrimental to health or dangerous to life

2 By promptly reporting all cases of contagious disease In this way many valuable lives could be saved and epidemics could be averted

3 By enforcing strict isolation and employing suitable disinfectant and antiseptic measures in cases of contagious disease

4 By reporting all cases in which isolation cannot be secured or proper medical treatment be carried out

5 By visiting the Willard Parker Hospital and

thus being able to speak from personal observation of the advantages which it affords

6 By being careful not to send patients with contagious diseases to the dispensaries

7 By heartily cooperating with the medical inspectors of the Board in any case in which the latter are met with

8 By reporting all food or drink adulterations coming under notice

9 By reporting any instance observed of decaying fruit or other kind of unwholesome food offered for sale

10 By reporting all defects in plumbing, light and ventilation observed in houses visited

11 By paying special attention to the sanitary condition of the homes of patients

12 By promptly reporting all births This was of special service in securing the more general vaccination of infants

13 By the appointment of a committee of physicians, not less than five in number, to confer with the Board of Health, whenever such conference seems desirable, on all matters pertaining to the public health

At the end of the meeting a resolution was adopted to the effect that the President, Dr Jacobi, should appoint a committe of five Fellows of the Academy, of which he (*Dr Jacobi*) should be one, to confer with the Board of Health in the manner suggested by Dr Bryant in his paper P B P

THE TREATMENT OF FRACTURES OF THE OLECRANON

Dear Sir —An editorial article in THE JOURNAL of last week, under the above title, recalls a device for maintaining apposition of fractured olecranon which I have found useful, and which may be thought worthy of adoption in the treatment of this fracture and that of the patella

The evidence of its utility rests upon only one case of each kind, but the first afforded a fairly crucial test, as the subject was a very muscular young man, and the wide separation of the olecranon from the shaft of the ulna—nearly an inch—showed that the periepiphyseal fibrous tissues had been wholly disrupted The injury was dressed immediately after its occurrence in the following manner

A thick shellac felt and splint was moulded to the anterior surface of the arm and forearm in extension, reaching from near the wrist to near the shoulder Enough padding was employed to insure an unobstructed circulation under a tight dressing A piece of tin about fourteen inches long and three fourths of an inch wide was bent flat upon itself at one end, to hook over the lower end of the splint, which was then applied, the strip of tin lying along its external surface The tin was then bent out at right angles at a point about four inches below the olecranon, after which a firm muslin bandage was applied, beginning at the hand Upon reaching the angle in the tin, the roller was carried over the upper fragment in successive loops, each brought down to the angle and secured by one or more circular turns Then the customary spiral turns to the shoulder were applied Finally, the free end of the tin was bent back so as to draw more terse, if possible, the coaptation loops, and a few turns of bandage fixed it securely

The dressing remained unchanged for a week, when it was partially removed and tightened a little by bending back the tin a trifle, although no separation had occurred, nor at the end of the second week, when passive motion was cautiously made At this time I lost sight of the patient, who resided in a neighboring State, but the physician who had the final charge of him wrote me that the olecranon adhered perfectly, and evidently by bony union

With many surgeons it is a grave objection to the adhesive coaptation strips that, if efficient, they cut into or inflame the integument at the point of pressure over the olecranon

With the muslin bandage this does not occur Its hold at the insertion of the triceps is sufficiently secure, and with the tin-loop point of resistance, the completed dressing must be as firm as that of M Fraipont Moreover, there is the additional advantage that it can at pleasure be tightened *in situ*, without disturbing it more than to undo the last few turns of bandage J R. BARNETT, M D

Neenah, Wis , Nov 15th

MISCELLANEOUS.

A CHECK TO THE ILLEGAL USE OF PHYSICIANS' NAMES — Two weeks ago, under the heading of "A piece of News paper Effrontery," we commented on an article in one of the newspapers in which outrageous liberties were taken with a member of the profession He was made to appear as having publicly recommended a certain nostrum We learn that the gentleman whose name was thus unwarrantably used has had the public spirit to unearth the real author of the article, and bring him before one of the courts on a charge of criminal libel, also that it was only the fellow's prompt plea of guilty, accompanied with his formal promise not to offend further in that manner, that saved him from the penitentiary As it was, he was fined roundly —*New York Medical Journal*, November 19, 1887

DR FREDERICK HYDE, of Colorado, N Y , one of the organizers of the American Medical Association, died recently at his home, in his eightieth year

DR KRAUS, editor of the *Wiener Medicinische Zeitung*, and author of Kraus "Medicinisches Lexicon," died recently, aged 59 years.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM NOVEMBER 12, 1887, TO NOVEMBER 18 1887

Capt C B Byrne, Asst Surgeon, relieved from temporary duty at Ft McHenry, Md , and will return to his proper station, Washington Bks , D C S O 242, Div Atlantic, November 11, 1887

First Lieut F V Walker, Asst Surgeon, relieved from duty at Post of San Antonio, and assigned to duty at Ft Ringgold, Tex S O 130, Dept Tex., November 8, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY DURING THE WEEK ENDING NOVEMBER 19 1887

P A Surgeon P M Rixey, ordered to the Naval Dispensary, Washington, D C

THE

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ORIGINAL ARTICLES.

LITHIASIS IN PREGNANCY

Read in the Section on Obstetrics and Diseases of Women, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY J E. KELLY, F R C S I, M R I A,

OF NEW YORK

LATE SURGEON TO JERVIS STREET HOSPITAL PROFESSOR OF PHYSIOLOGY, SURGERY ETC, DUBLIN IRELAND

When honored by an invitation to contribute a paper to the proceedings of the Obstetrical Section of the American Medical Association, I was anxious to select a topic which, while possessing some novelty and belonging to the wider domain of General Medicine, might be useful and pertinent to the subjects within the province of this department

It is some years since first I observed the frequent manifestations of certain symptoms during pregnancy, and their subsequent persistence, that could be explained most satisfactorily by ascribing them to the influence of the lithic acid diathesis Additional observation and reflection having satisfied me that the association was more than coincidental, I have concluded to submit my speculations to the consideration of this Section That many observers have noticed the association of lithiasis with pregnancy is beyond question, but I am not aware of any attempt to present the facts and inferences in continuity It is not so evident, either, that the profession generally has recognized the affiliation or the tendency which the phenomena of gestation have to develop this dyscrasia My intention is to review the characteristics of lithiasis, their analogous manifestations in pregnancy with the physiological processes in the last mentioned which favor their development, and thus I shall endeavor to establish a definite relation between the two conditions

For the sake of continuity I will briefly recapitulate a few generally recognized principles concerning lithiasis It is a diathesis associated with the presence of an excess of lithic, or uric acid in the system, and made manifest by very varied phenomena, affecting almost every structure and function Uric acid is derived from the proteid tissues and from the albuminous or nitrogenous foods The manner of the formation of uric acid is a subject as yet involved in much obscurity, but it is generally conceded that, when it exceeds the normal quantity, marked disturbance of the structure or the functions of one or more important organs is the result Primarily or secondarily the liver, stomach, kidneys, nervous system, lungs, and the blood are severally or collectively involved, although in many instances no departure from the normal condition can be detected in some one or more of these factors Lithiasis is intimately associated with those important excrementitious substances, urea and the urates, which result from and, other things being equal, represent in constant proportions the constructive and the destructive cell-changes of the system The intermediate link between the presence of uric acid and the manifestations of lithiasis is the deposition of the former in the affected tissues or of the salts produced by its combination with some of the inorganic elements, notably that with sodium The resulting disturbance of the functions or the nutrition of the invaded organs produces the symptoms of the diathesis, and verily their name is legion

The specific gravity and the alkalinity of the blood is diminished and the excrementitious matters, especially the uric acid and the urates, are increased in quantity, the alkalinity of the blood is less than normal and the fibrin is increased The objective symptoms of anæmia also are frequently present and, naturally, they are associated with a reduction of the red corpuscles The results of these abnormal conditions of the blood are very numerous, eczema, pruritus, phlebitis, neuralgia, myalgia, œdema and dropsy being prominent among the many In the vascular system the arterial tension is increased and cardiac hypertrophy, simple or complicated, is a frequent consequence Palpitation, irregularity of action, syncope and other diseased cardiac conditions are often present

It is reasonable to suppose that respiration is involved in an important manner, as uric acid is the result of arrested oxidation of the nitrogenous elements which otherwise are convertible into the easily eliminated urea The most frequent examples of disturbance of the respiration are dyspnœa, irritable cough and hiccough

The connection between lithiasis and the digestive system is close, and its manifestations are marked and frequent Without dwelling upon the causal influence of gastric acidity and imperfect digestion, we must notice their frequency in lithiasis The various actions and secretions are deranged, producing morbid appetite, gastralgia acid and other eructations, nausea, vomiting, irritative diarrhœa or constipation, tympanites, hæmorrhoids, and several other symptoms

The liver suffers more from functional than from structural derangement, although inflammatory changes are not infrequent We must not forget that one of the best sustained theories of lithiasis attributes this morbid condition to the functional disturbance of this organ, and we also witness biliousness, jaundice, and hepatitis That the spleen is involved in lithiasis is indicated by the constant presence within it of a large quantity of uric acid

The relation between lithiasis and the kidneys is universally recognized, although in some rare instances no structural changes can be detected As a rule, however, some of the varied phenomena of inflammation, from hyperæmia to cirrhosis, degeneration or a deposition of the solid constituents of the urine can be demonstrated, and the character of that fluid is greatly and variously modified The phenomena associated with the urinary organs are too numerous to be detailed, but in definite relation with lithiasis are abnormal polyuria and diabetes, suppression and retention of urine, irritable bladder and cystitis

Numerous nervous phenomena appear in lithiasis which may be collectively attributed to the development of increased irritability and malnutrition Psychical, sensational, spasmodic and trophic phenomena are constantly witnessed and appear to stand convertibly as cause and effect with the disease Manifestations of these nervous perturbations are frequently witnessed in the form of convulsions, cramps, myalgia, neuralgia, hysteria and mental aberration

The changes produced by lithiasis in the skeletal structure and those of the connective tissue series generally, are characteristic The bones suffer by the formation of nodes, laminæ and exostoses, the ligaments and fasciæ by the deposition of the urates and the consequent inflammation, contraction and rigidity The synovial membranes are affected with inflammation, adhesions and induration

The influences which predispose to lithiasis are many, and it would appear that a marked departure, either idiopathic or acquired, from the normal standard of the function of any important organ determines its development It is also significant that the influence of a single manifestation of lithiasis is liable to be followed by serious and far-reaching consequences, indicating the establishment of the diathesis

If we now turn our attention to the phenomena of pregnancy, we cannot fail to observe a remarkable coincidence between the diseases as well as the pathology of that condition and of lithiasis All those features to which I have alluded when reviewing lithiasis are frequently seen in pregnancy The structural changes which are present in the former are of common occurrence, and the physiological conditions of gestation are favorable to its development In the etiology of the two classes of diseases the parallel is sustained, as in both we have the same hæmic influences, the same irritable or "explosive" state of the nervous system, and the same renal and digestive disturbances In pregnancy we find additional and potent factors in the increased metabolic energy, and the mechanical conditions which, if present in a lithæmic individual, would most probably contribute to the development of the disease Those morbid conditions which are ascribed with the greatest confidence in pregnancy to the mechanical factors, as venous dilatation, œdema of the lower limbs and the genitals, hæmorrhoids, retention and irritable bladder, are frequently seen also in gouty males and non-pregnant females

The condition of the maternal blood in gestation is in keeping with the physiological relation which exists between the mother and the development of the fœtus The cell changes of the composite animal are increased proportionately with the growth of the fœtus and the containing uterus The fœtal organs, with the exception of the heart and liver, are practically inert, and the double duty is imposed on the corresponding maternal organs The medium through which these additional functions are performed is the maternal blood, and consequently the quantity of the nutritive and the excretory substances conveyed by that fluid is necessarily increased and, owing to the greater constructive and metabolic energy exerted during the process of development, increased most probably in more than in the ratio of the dimensions of the utero-fœtal mass to the mother The chief nutritive and excretory matters circulating in the blood are nitrogenous and inorganic, and consequently are most conducive to the development of lithæmia, as well as of puerperal septicæmia, eclampsia, peritonitis and thrombosis The alkalinity of the blood which is so essential to the solution of the lithic acid compounds is diminished Owing to the reduction of the number of the red corpuscles, together with the constant absorption of the nutritive materials by the exacting fœtus, hydræmia frequently exists The consequent tenuity should be additionally favorable to the deposition of the uric acid and the urates The increased quantity of fibrine which has been observed during gestation may afford a clue to some cases of cardiac disease, as well as to the not unusual occurrence of embolism and thrombosis It may be permissible to speculate upon the possibility of those conditions, which the fœtal fluids would naturally share with the maternal blood, affording a clue to the etiology of some of those obscure cases of intra-uterine deformities and disease, as well as of congenital cardiac lesions and adherent placenta, depending upon plastic and inflammatory changes of the serous and enveloping membranes of the fœtus

In the vascular system the most constant results of pregnancy are the increase of the arterial tension and of the cardiac action The cause of these conditions in the earlier months of gestation is rather obscure, but as pregnancy advances it becomes very obvious The increased quantity of fluid which the heart must propel, the augmented functional activity of the kidneys and the other maternal organs, the additional resistance which is offered by the utero placental circulation, which may be largely due to the osmotic process in the placental circulation during the interchange of the maternal with the fœtal blood, all contribute to throw more labor upon the heart This organ is stimulated to greater rapidity of action in the entire 24 hours by the profuse cell

changes in the nutritive and excretory organs of the two systems and by the elevation of temperature in the uterine circulation I may mention incidentally that the abeyance of the phenomenon of the decrease of the beats on the assumption of the sitting or the recumbent posture has been recently proposed as of diagnostic value in cases of obscure pregnancy, which I have verified as early as the second month The result of the additional strain is conservative hypertrophy of the heart The form of hypertrophy is a matter of speculation, and whether it is simple or eccentric is a question of interest both to the physiologist and to the physician Another natural result of this condition is the more forcible action of the heart and an increase of the violence with which the valves and the other mechanical structures perform their functions This violence is liable to produce local inflammation at the points of areas of valvular impact or contact and at the sites of traction of the chordæ tendineæ These localities are thus prepared for the deposition or the infiltration of the morbid elements of the blood, with consequent stenosis and valvular insufficiency The resulting irregularity or roughness of the endocardium also affords a suitable surface for the deposition of the so called "vegetations" to which the excess of fibrine is peculiarly favorable These conditions may be independent, or associated with the results of the hypertrophy, which may be followed, like the uterus, by normal involution or the analogous conditions of subinvolution, or that which is rarer, superinvolution, thus producing simple or complicated cardiac hypertrophy or weakness with or without dilatation Again, if the process of involution be rendered abnormal by the presence of lithiasis or some other disturbing influence, the result may be fatty, calcareous or other cardiac or vascular degeneration To the last specially mentioned condition the discovery of lacunæ of calcareous matter in the organism of the pregnant female would indicate a special tendency The heart suffers mechanically also during gestation by the encroachment of the gravid uterus on the thoracic cavity, as is evidenced by the palpitation which is sometimes produced when the pregnant female assumes the recumbent position, and which is rapidly relieved by change of posture

The influence of gestation upon the respiration is not as distinct as upon the other functions, but although a certain compensatory change occurs in the shape of the thorax by its increased antero posterior and transverse dimensions, it is obviously disturbed by the growth of the uterus, and the inspiratory and expiratory movements must be diminished The most marked change in the expired air is due to the increased elimination of the carbonic acid, and probably of the water which is a natural consequence of the respiratory needs of the second organism The most frequent disturbances of respiration are dyspnœa, hiccough and irritable cough A particular interest is attached to the fact that physiologists have recently localized the centre which is supposed to preside over the formation of uric acid at a point close to the respiratory centre in the floor of the fourth ventricle That this has any practical bearing upon our present investigation is not very evident, but when the principal difference between uric acid and urea is the lesser atomic combination of oxygen with the former, the relative position of the two centres may have some causal relation to the presence of the acid in pregnancy

The phenomena presented by the chylopoetic system in pregnancy are so numerous and important that we can only briefly indicate their relation to our subject In the first instance we find that as gestation advances the pregnant woman generally consumes a greater quantity of food and of a more varied kind, a circumstance which is notorious for its association with the gouty diathesis She also suffers from functional dyspepsia, cardialgia eructation and vomiting The success which so frequently follows the exhibition of anti lithic remedies in such cases tends to indicate the nature of these disturbances The intestines furnish us with additional links for our chain of evidence by the occurrence of diarrhœa, often of an irritative character, and of constipation symptoms which are frequent in lithiasis

The hepatic disturbances are additionally interesting owing to the weight of evidence which has been adduced to convict the liver of being the chief offender in the production of the lithiasis There is undoubtedly more than a causal relation between pregnancy and hepatic disturbance as is evidenced by the frequency of pigmentation and jaundice, acute yellow atrophy of the liver, a disease which is associated with gestation with significant frequency This fatal disease, as well as some other hepatic lesions, is additionally interesting in our present speculation owing to its causal relation, which it shares with pronounced lithiasis or gout, to grave nervous depression, emotional disturbance and bad hygienic surroundings

The mechanical influence which the gravid uterus exerts on the digestive organs is easily recognized with regard to the gastro intestinal tract, but unless obstructive jaundice is produced in the later months of gestation by the traction of the biliary ducts consequent upon the upward displacement of the liver, it is difficult to recognize it as an important factor It is hardly possible for the biliary ducts to be compressed in the carefully protected position which they occupy, first, in the transverse fissure of the liver, guarded by the lobulous quadratus and in front of the vena cava, then in the lesser omentum behind the duodenum, and lastly, between the heart pancreas and the second portion of the duodenum It is more probable that this phenomenon is the result of direct pressure upon the liver, or some coincidental disturbance attributable to the dyscrasia or to an occult reflex nervous influence So little is known of the spleen and its relativities that we cannot expect to establish a definite connection between it and the diseases of gestation, but in that rare disease, leucocythæmia, we find that a very large proportion of the cases occurring in females are associated with pregnancy

The influence of gestation upon the urinary organs is very marked owing to their anatomical association as well as to the important duties which they perform as the chief emunctories of the system The quan-

tity of urine is notably increased and the total amount of the excreted solids is greater than in the non-pregnant state The changes which take place in the kidneys vary from slight and transient hyperæmia to the acute and chronic parenchymatous nephrites of pregnancy Almost all the pathological changes to which the kidneys are liable are associated with gestation, but those which are most frequently present are such as are usually found in lithiasis It has not been demonstrated that renal hypertrophy accompanies normal gestation, but from analogy with the conservative changes which take place in the abiding organ when one kidney has been extirpated, or destroyed by disease, we would expect to find compensatory enlargement owing to the greatly increased functional labor of these organs We are familiar with the idea that renal disease is easily induced in those individuals upon whom nature has bestowed organs which are barely adequate to their ordinary necessities When any unusual strain is put upon them by exposure, disease, rapid increase of weight, or overwork, the mediocre organs fail, and we have another example of the close relation which exists between weakness and irritability or disease That such a strain is considerable in pregnancy is very obvious, arterial tension is increased, the amount of solids and fluid passing through the organs is greater, of the total vital force they experience a diminished influence and the disastrous results are only too frequent It is very probable that the so called puerperal diseases of the kidneys originate during gestation, and that the evil effects have only culminated when the additional strain of parturition is imposed upon the diseased and incapable organs

The theory of the mechanical influence of the gravid uterus by its pressure on the renal veins has been ably refuted by more than one observer, with whom, upon anatomical grounds, I entirely agree, but I consider it more than probable that the ureters are subjected to such interference in the lower portion of the abdominal cavity where they lie on the psoas muscles or in the cavity of the pelvis in close contact with the cervix uteri, and where every modification of position and dimension must produce mechanical effect The results following the ligation of the ureters in the inferior animals, which produces grave structural changes in the kidneys and the copious accumulation of the urates and uric acid in the blood and the tissues generally, clearly indicate the consequences of any mechanical obstruction This is most liable to occur in the later months of pregnancy or during parturition, and it may explain the appearance of eclampsia and other acute disorders, especially in difficult or tedious labors The remarkable absence of the elevation of the general temperature during the greatly increased metabolic activity of pregnancy, and notwithstanding the fact that the uterine temperature is higher than that of the system, may have some connection with the great depression of vital heat observed after ligation of the ureter

The nervous system is peculiarly prone to abnormal manifestations during pregnancy The influence of this system over all other organs of the body and their reciprocal effects are too well known to require more than a cursory notice Morbid conditions of the blood exercise a marked effect upon the nervous phenomena owing to the consequent mal nutrition of the delicate nervous structures, and this may account for the frequency of nervous perturbation during gestation These nervous lesions which appear to have an etiological relation to this condition have already been mentioned in connection with lithiasis, but it is difficult to determine the proportion of causality to be attributed to the one and the other of those indissolubly associated or reciprocal factors The frequency of insomnia is interesting and may constitute a clue to the investigation of the purely nervous group of symptoms In the vomiting of pregnancy the closest investigation frequently fails to discover any cause other than a nervous influence, the nature and relations of which I have already discussed at some length in a paper entitled, "Causality in Disease," which appeared in the *Boston Medical Journal*, of April 15, 1886

I shall briefly refer to the conditions of the muscular and skeletal structures which we witness in pregnancy That condition which is termed mollities ossium, which is closely associated with child bearing, is peculiarly interesting as evidencing the powerful influence of the nutritive demands made by the fœtus on the maternal system In this disease the inorganic elements being supplied in deficient quantity by the digestive system of the mother, are absorbed from her bones and carried by the blood to the placental circulation The presence of rheumatoid and other arthritic lesions are notably frequent during the child bearing period and their occurrence after gestation is often observed The relation between these diseases and lithiasis is generally recognized and affords additional testimony in favor of the nexus which I am endeavoring to demonstrate The frequency of muscular rheumatism and spasm, or cramp, is also notable, and their association with lithiasis is well established

As in the *résumé* of lithiasis I wish to recall the persistent effects upon the system caused by the occurrence of a single pregnancy which manifesting themselves by various lesions not to be ascribed to any other other influence and indicating the permanent adoption by the constitution of a morbid action which must be regarded as being closely related to lithiasis In endeavoring to establish a parallel if not an identity between the constitutional tendency produced by lithiasis and pregnancy, I have indicated that both originate in a grave disturbance of nutrition, they present a similar modification of the blood, the pathological changes bear a close resemblance, the prominent functional disturbances are broadly identical, the numerous sequelæ are similar, and lastly, after one or more visitations the constitution is prone to adopt the induced condition as a diathesis

ECLAMPSIA

Read before the Section of Obstetrics and Gynecology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY WM T TAYLOR,[1] M D,
OF PHILADELPHIA

Therapeutics, like dress, has its fashion, and often the treatment of disease as well as the pathology will change with the times Nothing illustrates this better than the theories of its nature, and the treatment of eclampsia

During the first half of the nineteenth century, puerperal convulsions were treated almost exclusively by free depletion, and all the works on midwifery declared that that was the principal remedy, far superior to all others, but after awhile, in consequence of the do nothing system of Hahnemann, and the moral precept against the shedding of blood, which began to prevail amongst the people, the doctors laid aside their lancets—which they had always carried—and forgot their skill, so that as the late Professor Gross declared, "bleeding became one of the lost arts "

This is particularly unfortunate in the treatment of convulsions in childbirth, which usually yielded sooner to depletion, than by any modern improvement Although some cases do recover without blood letting, if they are well selected and properly understood, yet even they will bear some depletion, for in the formation of a new being, a large amount of blood is required for this work, and the mother will often lose a great quantity in childbirth, and recover rapidly afterwards

The subject of eclampsia has been written upon so often, that it has become a very trite theme, one on which very little new can be said, yet a *resume* of its pathology and treatment may not be objectionable at this time, when the medical pendulum is oscillating from one extreme to the other, and the treatment varies with the age in which we live

Eclampsia, which may occur to parturient women during the later months of gestation, or when in labor, is so named from the Greek $\epsilon\pi\iota\lambda\alpha\mu\beta\omega$, to flash out, because of the suddenness of its occurrence

It is very rare, if it occurs at all, amongst the Indian Tribes, for Dr Engleman does not mention it in his "Labor among Primitive Peoples," so that it must be regarded as one of the results of civilization, and a violation of nature's laws, during gestation, and in fact, from puberty when young women are put in tight fitting dresses and corsets, which prevent a full development of the abdominal and pelvic organs, and also as Dr Goodell has shown in his address on "The Dangers and Duty of the Hour," that faulty system of female education when the excessive brain work of young women often injures and prevents physical and sexual development Then when gestation and labor occurs the overacting brain becomes engorged with blood, and if not relieved by suitable remedies eclampsia may occur

Puerperal convulsions are either *sthenic* or *asthenic* Hippocrates considered them "to take place from repletion or depletion," they are therefore caused by plethora or anæmia, for an overflow of blood may produce convulsions, as in apoplexy, or an exsanguineous condition of the blood vessels may cause them when persons or animals are bled to death, so that the same condition may arise from opposite means, hence, the treatment must be governed accordingly

It is a curious fact, says Ramsbotham, that the two perfectly opposite states, viz, too great a fullness of the vessels, and too great emptiness, will produce in this respect exactly the same phenomena, and I look upon a case of puerperal convulsions to be in fact, one of apoplexy, only that we have superadded to the common apoplectic phenomena violent spasmodic contractions, and this symptom is dependent upon the irritable and excitable state of the nervous system, always in a greater or less degree accompanying pregnancy and parturition

As these convulsions arise from two distinct, and opposite conditions of the system, one in which excessive distention of the blood vessels of the brain or spinal cord, or both produce eclampsia by compression, the other, in which from excessive loss of blood, from hæmorrhage, natural or artificial, the nerve centres are drained of their blood, giving rise to convulsions from anæmia, as first pointed out by Marshall Hall In the one case bleeding is remedial by relieving the oppressed nerve centres and restoring the balance of the circulation, while in the other it only increases the evil Another most important and frequent cause is in the constitution of the blood, which becomes changed from its normal condition during utero gestation, by the mechanical pressure of the gravid uterus or the intestines, the renal vessels, nerves and kidneys, and the upward pressure against the diaphragm prevents its free action, and the perfect oxygenation of the blood, which then becomes a morbid stimulant to the nervous system in consequence of the albumen in the urine, and the retention of urea and other salts in the blood

The frequency of convulsions in primipara is owing to the fact, that the pressure is greater against the kidneys and renal vessels, in consequence of the rigidity of the abdominal walls, whilst in subsequent pregnancies the muscles are more relaxed, and consequently the congestion of the kidneys is not so great—for that is the chief cause of albuminuria in eclampsia, for this condition of the urine always exists in puerperal convulsions, as has been proved by Drs Lever, Simpson, and subsequent writers on the subject

Professor Braun, of Vienna, referring to the coincidence of eclampsia and albuminuria, says, "that this has opened a new path to the knowledge of this most dangerous disease, so that the eclamptic convulsions of women during pregnancy, must be considered to be identical with the fits of adults, in general, that are produced by uræmia in the course of Bright's disease

Frerichs conjectured that eclampsia was caused by the changing of the urea into carbonate of ammonia in the blood, and that this was the cause of

[1] Deceased

the death of the fœtus, but of this he gave no proof, and Dr Hammond, by experiment, has disproved this theory

At a recent meeting of the Société de Biologie, MM Doleris and Butte communicated the results of some chemical and experimental observations on five patients with eclampsia, and found in the blood a crystalline substance, which was toxic to rats and sparrows in almost infinitesimal doses, and that the proportion of urea in the blood was not excessive, its amount being too slight to attribute to it the cause of eclampsia

From all the information we have on the subject, we must necessarily come to the conclusion that the cause of puerperal convulsions is undecided, and it is yet *sub judice*

Dr T G Thomas says, that eclampsia differs from epilepsy, for the latter generally has an "aura" or warning like a cold vapor or sensation which arises from some part of the body, and proceeds to the head, when unconsciousness occurs, and the subject falls in a fit—being affected with clonic spasms, or alternate action of the flexor and extensor muscles, whilst in eclampsia there is a rigidity of the limbs, which are extended and bent backwards as in opisthotonos Epilepsy also occurs in both sexes He considers eclampsia to be caused by a nephritis which he calls puerperal, as it arises only during utero gestation, leaving the blood surcharged with some noxious elements which the crippled kidneys cannot eliminate, whilst we know not how this nephritis is produced, yet when gestation ceases to progress the renal trouble soon disappears The eccentric form of eclampsia may be caused by some reflex action arising from some irritation of the uterus or its appendages, the bladder, kidneys, stomach or bowels, for when these viscera are relieved the convulsions will often cease

They may also be caused by some atmospheric influence, and some writers say that they are more frequent when there is "thunder in the air," for then it is more highly charged with electricity An instance of this kind occurred in my own practice, when an attack of eclampsia was ushered in by a vivid flash of lighting, and a loud clap of thunder preceding a storm

The premonitory symptoms are headache, giddiness, drowsiness and a feeling of intoxication, with a staggering gait, a ringing in the ears, a dimness of vision, and even a total loss of sight, a numbness of the arms and legs, with difficulty of articulation

Stout, fat, able bodied women with short neck, swollen limbs and bloated faces are particularly liable to these convulsions, and if there is diplopia with flashes of light, a sudden loss of hearing with a feeling like a sudden blow on the head or a severe sudden pain in the stomach, the attack is imminent Then unconsciousness occurs, the face becomes red or purplish, the conjunctivæ are injected, and the pupils fixed, a violent jerking of the muscles of the upper and lower extremities takes place with a rotation of the head to one side, more often to the left, has been my observation There is also a horrid distortion of the face, with rapid breathing, causing at times a loud hissing sound The tongue is often thrust between the teeth and severely bitten, so that the bloody froth and saliva, which issued from the mouth of the patient when writhing in these contortions, presents a horrible scene to the attendants and friends

After a short time the fit passes off, and the woman may recover her consciousness slowly, but is not aware of what has occurred, yet complains of her head, and soon the convulsions may return with a repetition of the same condition, or she may remain comatose, with dull heavy stertorous breathing during their intermission The uterine contractions will continue, and the child may be expelled from the womb without her consciousness returning, or even the attendants being aware of it, until it is seen or felt between her thighs, it however, is generally dead

If the coma continues the danger of a fatal termination to the case is greater than when there are intervals of consciousness between the fits

As to the treatment it depends on the character of the convulsions, and the views the obstetrician may entertain of their pathology But in the hyperæmic cases when the pulse is full and hard, the most rational plan is to bleed promptly and freely at the beginning of the attack, so as to make a decided impression on the circulation, which alone can indicate the amount to be taken, and therefore the pulse should be watched As the majority of cases of eclampsia are in primipara, the rule is to bleed, for as Dr Goodell says, "an early, timely and full bleeding invariably relieves intra cranial pressure, whether caused by an effusion of blood or serum," and Dr Packard related a case to the Obstetrical Society of Philadelphia, of convulsions and death from apoplexy in labor, which was not bled, and the autopsy showed the meninges of the brain to be deeply congested, and all the tissues of the brain exceedingly vascular In the majority of cases of eclampsia the symptoms so strongly resemble those of apoplexy that venesection, either general or local, is not only advised, but absolutely required, even if other remedies are used

After depletion an enema of castor oil and turpentine will be useful, and if the stomach is loaded with food an emetic will be necessary, whilst cold should be applied to the head and neck, and the extremities kept warm When the fit is on we should prevent the patient from injuring herself, by restraining her from falling from the bed, or from striking her head or arms against any hard substance, by placing something between her jaws we prevent her biting the tongue, which is often seriously injured by getting between the teeth Slapping the face with a wet towel will sometimes excite inspiration, and arrest the convulsion

A vaginal examination should be made, and if the head has descended within the pelvic canal, deliver as quickly as possible with the hands or forceps, but if the paroxysm has subsided, trust to the uterine action to effect delivery, unless the presentation is abnormal After bleeding, inhalations of ether or chloroform are useful—an injection per rectum of

chloral hydrate, or a hypodermic injection of morphia

These remedies each have their advocates, who rely on them wholly without venesection, but I believe that the *asthenic* cases *only* can be cured without depletion, for in such there is not that intense pain in the head, which causes the woman to scream out violently—no redness of the conjunctiva, nor full, hard, throbbing pulse, but an anæmic condition of the system when bleeding may be omitted

Such cases can be relieved by inhalations of ether or chloroform, with injections of chloral repeated from time to time when the convulsions return As soon as the patient can swallow she should be given bromide of potash to allay nervous irritability If labor begin, promote delivery by all proper means, but if the fits have ceased and the uterus is quiescent, let it alone and wait for its action, which may not occur for several days, or even weeks after We should, however, improve the condition of the blood by the use of iron and tonics, with diuretics to act on the kidneys, of which nothing is better than Basham's mixture

Some cases which have occurred in my practice will be related

A young married woman of plethoric habit, had been affected with headache during the latter part of her first pregnancy, which was relieved somewhat by a purgative, and the application of cups to the back of the neck, was suddenly seized with a convulsion at midnight, when a neighboring physician was called on the emergency On my arrival I found her unconscious, with a full, hard pulse, and stertorous breathing She was bled freely, about two pints being taken, which relieved her breathing, and reduced her pulse, which became quite soft and compressible This arrested the convulsions, only occurring during the depletion, she however remained unconscious An injection of spirits of turpentine ℥ss with warm molasses and water was given every two hours, until she had a copious evacuation from the bowels, and cold was constantly applied to the head On vaginal examination there was no sign of labor, and as there were no more convulsions and she was breathing easier, we allowed her to rest On the next morning the os began to dilate, and in a few hours it was fully expanded, but as the expulsive pains were feeble and ineffectual, I applied the forceps and delivered her of a dead babe An anodyne of morphia, valerian and camphor was given to produce sleep, but she did not recover her consciousness until the following day, being unaware of what had occurred during the previous forty eight hours, her diminished abdomen alone revealing to her the birth of her child From this time she recovered perfectly, and although she has had several children since, yet has had no more attacks of eclampsia

J K, after an easy labor, gave birth to a child at 5 P M, the placenta coming away without any assistance, but the hæmorrhage was very slight At 8 P M she complained of pain at the epigastrium, with eructations, which were relieved with sulph morph in aq camph She slept some but at 2 A M she suddenly gave a sharp scream and had a fit of eclampsia, which was followed by others Being summoned, I bled her copiously and had cups applied to the back of the neck, injections of castor oil and turpentine were given, croton oil applied to the tongue, inhalations of ether were also used and ice placed on the head, but all proved ineffectual, for neither Dr Drysdale (who was consulted) nor I could do anything to prevent her death, which occurred just 24 hours after the birth of her babe

A post mortem examination was refused, but we believed that a rupture of a cerebral vessel must have taken place, for she was unconscious from the first fit

I was called by a physician to see a woman who had a convulsion whilst in labor As the head of the child was pressing on the perineum I assisted the delivery with my hands, which was soon followed by the expulsion of the placenta, and several clots of blood Another convulsion occurred, but by applying cloths wrung out of hot water, to the vulva, a free discharge took place Ice water was put on the head Her pulse was not full, yet she was unconscious, and had been so for several hours She was cupped on the nucha and temples, and an injection of oil and turpentine given On the next morning the doctor found his patient not only conscious, but in her right mind Her recovery was perfect in a few days

E B had an attack of eclampsia at 2 A M, was bled copiously, also cupped on the temples and behind the ears, became conscious and slept until daylight Labor began at 9 A M, and a dead babe was born at 10 30 A M No more fits, was soon well

S H, aged 35 years, pregnant with her fourth child, was very fat and full blooded, complained of headache and a "peculiar sensation extending from spinal column to the back of the head" Three pints of blood were taken from the arms, and a sinapism placed along the spine Labor began, but the os dilated very slowly, and when the expulsive pains set in she again had headache, and whilst the child's head was passing through the inferior strait she was seized with eclampsia The bandage was loosened and the vein reopened at the arm Another fit occurred as the head was coming through the soft parts, but it ceased when the dead child was born She remained unconscious for about an hour and then inquired for her babe, but was not told of its death This apparent improvement was of short duration, for more convulsions followed, when a cupper was sent for, and the assistance of my friend, Dr Stewart, who came promptly Cups were applied to the nucha and down the spine Inhalations of ether were used and her bowels were opened by injections of oil and turpentine, yet the fits continued Twenty grains of bromide of potassium were given by the mouth—for at times she could swallow Her pulse was 112, but compressible, the temperature 104°, the breathing labored The urine drawn by a catheter was full of albumen

Four hours later the pulse was 130, temperature 104½, breathing heavy, stupor increasing A blister was put on the back of the neck, warm cloths were applied to the pubes to increase the lochial discharge,

which was scant, but all our efforts were useless, for the stupor and convulsions were soon followed by coma and death No autopsy was permitted

C I, aged 24 years, being in the seventh month of utero-gestation, was œdematous over the whole body, and had severe headache, for which she took bromide of potash and diuretics, which relieved her considerably On January 16 she was seized with convulsions and became unconscious about midnight, when a neighboring physician was called in, who attempted to bleed her, but was unsuccessful The convulsions occurred every few minutes, she would turn her head to the left side and bite her tongue, so that bloody froth was issuing from her mouth Her pulse was full and hard, her breathing stertorous, and her face congested at times She had been in this condition about two hours when I arrived A leecher had been sent for, who applied leeches to both temples and the nucha, from which the blood flowed freely Cold water cloths were placed on the head and warmth to the feet Ether was given by inhalation, which controlled the fits somewhat, but several hours elapsed before they ceased and she became conscious During all this time the os uteri was firmly contracted, and showed no signs of labor

She was affected with dimness of vision for several days after, but under the use of diuretics and bromide of potash the dropsical effusion gradually subsided from her limbs and body, and by the help of quinine, iron, and generous diet she soon recovered, and resumed her household duties Labor, however, did not occur until February 8, when "the waters broke," and a putrid fœtus was expelled from the uterus without any trouble, which was soon followed by the placenta

H Y, a primipara, of nervous temperament, was suddenly seized with eclampsia at the beginning of her labor Her pulse was compressible and her face pallid, the jerking of the limbs and the twitching of the muscles of the face, with the turning of the head to one side, occurred frequently There was no stertorous breathing, but she was unconscious

An injection of ʒj hydrate of chloral in ʒiv of water immediately arrested the convulsions and she became quiet An examination per vaginam showed the os dilatable, and a face presentation, which was changed to an occiput anterior of the vertex, but during my manipulation she became restless, and I was obliged to repeat the chloral Feeling the necessity of a speedy delivery, and as the os was well dilated, I applied the forceps and brought the child's head through the bony pelvis quite easily, the body was born naturally without any help, and the placenta soon followed, but the child was dead The mother was still unconscious, but being put comfortably in bed, rested quietly There was no return of the convulsions She was not aware of what had occurred until 24 hours had elapsed, when, feeling sore, she inquired of the nurse what had happened whilst she was asleep Her recovery was rapid This was an asthenic case, and relieved without depletion

On considering the symptoms of eclampsia, and the conditions of the patients, the majority of obstetricians have concluded that depletion, either general or local, is the best treatment, followed by purgatives and opiates, with inhalations of ether and injections of chloral, that speedy delivery will often stop the convulsions Post-mortem examinations have revealed nothing positive as to the cause or pathology of eclampsia.

TREATMENT OF CHRONIC SUPPURATIVE OTITIS MEDIA

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY SETH S BISHOP, M D,
OF CHICAGO

The object of this paper is two fold *First*, to elicit a discussion of the subject which shall set forth the latest and best methods of treatment, *Second*, to protest against a mode of treatment that has been highly lauded of late I refer to what is called the dry treatment, in which the external meatus is filled and even packed, with a powder that is to remain from one visit to another Although the principle involved did not recommend the practice as being in accord with good surgical doctrine, the favorable results reported induced me to try it, as I have a habit of trying all new methods which promise any improvement on the old

The plan proposed was to remove all the pus from the drum-head and meatus with dry absorbent cotton, inflate the middle ear, again remove what discharge was forced through the perforation of the membrana tympani by the inflation, and then blow powder into the middle ear, and fill the external meatus with the same It was even urged that the powder should be put in, a little at a time, and each layer packed, one upon the other, until the meatus was full It was claimed that in this way the discharge was speedily stopped, and it was—that is, the exit was stopped as is a bottle with a stopper, so that the contents could not escape But suppose you want the contents of the bottle to escape as you probably do, how is this to happen unless you tap it at the bottom, as one does in the nasal douche? This is just the condition presented by an ear tamponed in this so called dry method The discharge can hardly escape through the solid packing of powder which the absorption of moisture converts into a dense plug The purulent discharge does not dissolve it even if a soluble powder is employed, and when iodoform or bismuth is used solution is clearly out of the question What results? The formation of pus does not often cease at once It fills the middle ear and finds exit through the Eustachian tube, if the tumefaction is not too great When the tube is not patulous the damming up of the sewerage of the tympanum will naturally force the pus through the mastoid antrum into the cells, after the middle ear has filled A very serious aggravation of all the symptoms is likely to follow

That this method is contrary to a very important prin

ciple of surgery must be patent to all An abscess should not only be opened, but should be kept open until the pyogenic process ceases It is a fallacious doctrine that air can or should be excluded from the middle ear in this manner Air will gain access to this cavity through the Eustachian tube and furnish pathogenic germs Free drainage should be maintained through the canal built by Nature, in order to avoid a complication of the existing trouble with mastoid disease Moreover, it is problematical whether one ever thoroughly cleanses the middle ear of pus by this dry method, even if the perforation be an unusually large one The cotton is not likely to enter the tympanic cavity and it is not desirable to have it for there would be danger of entangling the ossicles in its meshes and dislocating or removing them

The most rational and successful treatment I have tried is the following Cleansing the external meatus and middle ear thoroughly with injections of a 1 10,000 solution of mercuric bichloride, inflation by the Politzer method, or catheterization, iodine vapor if stimulation is required, drying the part with absorbent cotton and dusting them with finely pulverized boracic acid containing ½ of 1 per cent of mercuric bichloride, or if this should cause any unpleasant sensation, iodoform or boracic acid may be substituted

Hydrogen peroxide is valuable for cleansing the ear when there is a large amount of debris present in the form of pus mixed with epithelial scales, or cheesy concretions In addition to its excellent mechanical effect due to effervescence, the oxygen liberated destroys bacteria The latter result is also effected by the sublimate solution which in one half the strength mentioned will destroy bacteria in ten minutes The inflation ought to expel the fluid contents of the middle ear In cases of brief duration iodine is not required, but in very old cases, when the vital forces seem to have lost their powers of recuperation and resistance to pathogenic germs, tissue changes—the process of absorption and nutrition—may be favorably influenced by the judicious use of iodine vapor Drying the parts before dusting them with the powder leaves the patient more comfortable than the chilling effect of evaporation does The powder when slightly wet becomes hard and produces a feeling of stiffness, and sometimes of soreness Then if the powder be left dry we are enabled to determine at once when the discharge ceases

It is not necessary to fill the ear with powder If enough be insufflated to barely cover the suppurating membrane, all is accomplished that can be expected from the remedy, and the functions of the ear are not materially interfered with—an important consideration with many patients This treatment leaves no obstruction to free drainage, and in no manner invites mastoid trouble When the disease has just passed from the acute to the chronic stage the boracic acid powder had better be used without the bichloride, for the latter may cause some disagreeable crackling sensations and even pain But in the strength mentioned it is not likely to do so unless there is considerable inflammation

At the meeting of the Illinois State Medical Society, held in this city three weeks ago, the efficacy of iodoform as an antiseptic was called in question While the experiments of Heyn and Roysing, of Copenhagen, show that iodoform is inert in the presence of bacteria while the remedy remains in a dry state, de Ruyter has proved that iodoform in the presence of the fluids of suppurating surfaces undergoes chemical decomposition during which new iodine compounds are formed The splitting up of the iodoform, its partial solution and absorption, resulted in the destruction of the ptomaines, the product of pathogenic micro organisms, and hence the arrest of pathologic metamorphosis The laboratory thus confirms the practical conclusions which years of experience have forced upon the profession In conclusion, let me add in support of the method here outlined, that no routine treatment has ever yielded the uniformly satisfactory results in my hands that this has Were there time to enter into more minute details it would be interesting to consider the variations of treatment required by necrosis, etc , but that would extend beyond the scope of this paper Numerous illustrative cases might be adduced from my records, but I will mention but one that I have now under observation, in which the hearing was nil from chronic non suppurative inflammation of the left middle ear, and the voice could be heard only by shouting in the right ear, in which chronic suppurative inflammation had existed for over forty nine years I removed from both nostrils large polypi, which had prevented nasal respiration for twelve years The treatment I have described stopped the discharge in four days, and subsequent catheterization, etc , restored some hearing in the left ear, and so improved the right as to render conversation audible at a distance of fifteen inches

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RESECTION OF THE INTESTINE FOR FÆCAL FISTULA

Read before the Chicago Medical Society, October 3, 1887.

BY F HENROTIN, M D ,
OF CHICAGO, ILL

About five weeks ago I was called to Pullman, in this State, to see a patient On my arrival I found the patient affected with fæcal fistula The history of the case was this The woman had been affected with an obstruction of the bowels about fifteen days before I saw her The obstruction was evidently in the left inguinal region, as a mass was found there, which the physician in charge tried to reduce Failing in reducing it, she called in consultation a physician from Chicago, who went out there, and by dint of manipulation they succeeded in reducing this hernia Immediately succeeding the reduction of the mass in the groin, the patient complained of a great deal of pain, and a truss was fitted over the place where the hernia had existed This truss being somewhat tight gave rise to a great deal of pain, and after two or three attempts at periodical times to wear the truss it was laid aside The parts

by this time were considerably swollen and required attention In four or five days an abscess over the part had formed The pus was evacuated, and within forty eight hours there was seen a liquid substance oozing from the wound, and this developed into a well marked fæcal fistula (I should say that this was a femoral hernia on the left side) The fistulous opening was, at the time I saw the patient, very large and at the outer part would easily admit the thumb On examination I found the woman very much emaciated, thin and extremely weak She had then had this fistulous opening running about eight days, the parts around the opening were excoriated and the edges of the wound were in a gangrenous condition The discharge from it was excessive, and consisted of a greenish fluid exuding in large quantities, and mixed with this was a yellowish emulsive substance, having a slight fæcal odor

The weakness of the patient and her general condition, as well as the appearance of the wound, made me decide upon an operation Having given the matter careful consideration I operated the second day following There was no opportunity to do the operation under antiseptic precautions The surroundings were not the best for such an operation, but as far as it lay in my power antiseptic precautions were thoroughly carried out The instruments were all very carefully gone over beforehand, and the sponges and all material used was thoroughly and carefully prepared I decided upon simply making an incision in the linea alba of the lower abdomen, and taking out and detaching the bowel

I made an incision about three and one-half inches in length so as to get sufficient room, and entering the abdomen I slipped a large sponge into the opening, so that the end was immediately beneath the attachment of the bowel at the opening, I also packed in two or three little sponges at the side of this long sponge, in order to protect the parts as much as possible The large sponge reached from a little below the fistulous opening to the opening in the abdomen, so as to cover the parts thoroughly I then detached the ring of the intestine by slipping a finger around it and gradually working it apart, and so was able to grasp the intestine and bring it to the surface To make sure that the intestine did not slip, I had introduced a female catheter through the external opening four or five inches into the bowel, so as to be perfectly certain of bringing the parts to the opening without delay Everything worked very satisfactorily, and the bowel was brought to the surface, and outside upon the abdomen in a very few moments The only part in which there was any difficulty was in detaching the bowel from the opening Never having tried the procedure before, I was surprised at the amount of force necessary to detach it When I brought the bowel to the surface I packed sponges around it, and held the edges of the wound together in such a way that I knew that there was no possibility of further infection during the fixing up of the bowel Much to my chagrin, when I had brought the bowel to the surface, I found there was a very large and jagged opening in the bowel, and that the efforts at detachment had served it almost down to the mesentery

There apparently remained nothing to do but to take away the part, resect the intestine entirely, which I immediately did Taking the bowel up carefully (with these prepuce forceps) on each side, about three-fourths of an inch beyond the furthest point of the tear, I cut the bowel off square on the side of the tear, leaving one fourth of an inch margin These forceps answered the purpose admirably, each blade being covered with a soft rubber so as to leave no impression on the bowel I took them off once or twice during the process of stitching, and found there was not too much pressure being used, not enough to wound or injure the bowel Having cut off the bowel down to the mesentery I thought it best not to injure the mesentery, which proved, I think, a great element in the success of the case, and which has been further proved to my own satisfaction to be the proper way of procedure When I reached the mesentery I simply cut right straight across along the edge of the mesentery, and left it as nearly whole as I could, cutting directly in a line between the bowel and mesentery I then stitched up the intestine After stitching up the bowel and fixing up the mesentery to my satisfaction, I returned the bowel to the abdominal cavity, and looked for any debris or blood, but not finding any stitched up the abdominal wall tightly I had the long narrow sponge left from one opening to the other, and apparently not a drop of oozing had taken place in the abdomen I replaced this long sponge with a flatter one before stitching the abdomen, so as to protect it from any bleeding stitch holes, and in a short time had the wound closed, and had the satisfaction of knowing that there was no blood in the abdominal cavity

As regards the original opening, I simply scraped it off under Poupart's ligament, refreshed it, and introduced through that opening my drainage tube, closing the central wound entirely I also introduced a second tube into a sinus that went up along Poupart's ligament, along the inguinal canal

The case did remarkably well At no time was there any temperature beyond a few fractions of a degree above 100 She never even vomited There was no tympanitis, no bad symptom whatever The patient is now, after several weeks, doing quite well She was 59 years old and extremely delicate, but she is apparently very nearly in her normal health except that she has some colicky pains and occasionally a loose stool, whether this is due to a stricture and may prove permanent in character, I cannot say

The after treatment needs no consideration The dressing put on was merely the ordinary dressing of laparotomy after an ovariotomy—dry iodoform, an antiseptic cotton pad and antiseptic gauze outside The dressings were only disturbed once every four or five days There was a little abscess in the abdominal wall, but it gave no trouble and healed in a few days

The particular point I wish to bring to your attention is the propriety of operation The first item

of importance, which was very evident, was the extreme debility of the patient She was naturally a very weak woman, was 59 years of age, and whatever was to be done had evidently to be done soon Physicians who had seen the case and who assisted me at the operation, were also of that opinion, and they were possibly better able to judge than I was as they had watched the case from the first The patient was evidently failing, the pulse and general appearance indicated a great deal of weakness, and in addition was this constant drain I cannot tell the amount because I did not see the patient long enough, but it was considerable, the cloths and cotton padding, and dressings that were put on had to be changed several times a day, and when the abdomen was pressed above the wound this greenish fluid bubbled up in large quantities, mixed with a yellowish substance which I considered to be chyme, or rather chyle What else was to be done? Of course we know that in a fistulous opening of that kind it is an ordinary thing to make a plastic operation of some kind, but in this woman such an operation would have failed on account of the amount of fluid and the character of the opening, its edges being gangrenous, a pulpy greenish yellow The only way in which that patient could have been kept alive would have been to have given her food by the mouth, and tried to find the lower opening, injecting food in that portion of the bowel, and it would have been very hard to tell which was the lower opening The anatomy of the abdominal organs is such that we cannot always tell whether we are going up or down, under such circumstances But this case had to be taken care of, and something done at once The character of the fluid denoted that the opening was extremely high up, there was no dark substance, nothing that would represent fæcal matter, no appearance to indicate that it was low down, and the constant drain and the amount of fluid indicated that it was high up, because we know the villi of the intestines and lacteals take up the fluid as it goes along, and the lower down we get into the bowel the more the fluid disappears For these various reasons it seemed to me that the one thing to do was an immediate operation, that in view of the weakness of the patient, the character of the fluid and the evident high situation of the fistula, any other procedure would be followed by failure

The reason of the resection of the bowel is evident to you all, on viewing the specimen It certainly would not be very good policy to try and patch up a bowel torn up in that way As regards the way in which the operation and the stitching of the bowel was done and the way in which the mesentery was treated In taking the bowel out I found that the serous coat was extremely soft and pulpy, and I soon found, on trying to put a stitch through, that the least little pull would tear through the serous coat, and I really believe that a large portion of cases of resection of the bowel, where the stitches are taken as much as possible in the serous membrane, are very liable to fail on that account The way I stitched up the bowel was this I put one row of stitches made of silk in the whole thickness of the bowel, the three coats I started in on the edge on one side and then came out so as to bring my free ends on the inside of the bowel I then tied This was a very easy matter when the two portions of the bowel were held up by the forceps, and after thorough cleansing the two parallel edges were sewed together, each stitch being put so that it would fall inside when the bowel was brought around. The stitches were placed a little over a sixth of an inch apart, and I had no difficulty in going around the bowel in that way, always going through each of the three coats When I got down to the last two stitches I began on the outside and brought the needle through what was left of the unsutured inside of the bowel, then started another needle through the same way and brought them both out and tied The last stitch I put in the same way, bringing out the needles from each side through a little crevice and tied as close as I could, and then it was easy to take the knot and insinuate it between the edges of the last two stitches, so that it was tied on the inside I then put in a suture of *continuous* catgut stitched on the outside serous coat only After each stitch I had my assistant draw the catgut snug to hold the ground I had gone over, and so managed to surround the whole bowel without difficulty

As regards the mesentery, I did not interfere with it, but treated it in this way Here we have a section, this being the bowel above and this the mesentery below When I got down to this I stitched my mesentery in this way, not going through to this side so as to interfere with the circulation in this direction, and to make a V and hold it together in this way You can see the absolute security which it gives All authorities agree that interference with the mesentery is what produces the liability to sloughs, and they are extremely careful to tell us to interfere with the mesentery the least we can Another good reason for this treatment is that when the parts are brought together and the mesentery is not held its movements produce a strain on these two or three lower stitches and cause them to cut through, and at the same time allow fluids to pass out and produce fatal results So I stitched the mesentery in order not to destroy any of it, and at the same time hold it together so as to make the parts perfectly firm as a support to the bowel

Another item that may or may not prove of importance was this In cutting the bowel down on each side, having my clamp on, just before reaching the mesentery I curved my section slightly toward the side of the wound on both sides It seems to me this is of value, as this is apt to be a weak spot There being an accumulated amount of tissue here you can with this thickness of tissue take in a stitch on either side and hold them firmly so as to prevent as far as possible any strain at that place The larger the amount of tissue the firmer the union will be

One great factor toward the favorable issue of the case was that the woman hardly stirred, and did not vomit throughout the whole operation, and that the bowels at the time were almost absolutely flat That has a great deal to do with the success of such cases

It is a question whether in a certain proportion of

cases of hernia of a certain variety it would not be better to operate in this way About a week ago I was called to see a patient in Lake View who was vomiting and had evident obstruction of the bowels On examining the patient I found a bunch of something peculiar in the groin in the inguinal canal on the right side It was evidently something coming from the inside of the abdomen, but I could not make out what it was It did not have the appearance of bowel and I was loth to manipulate it very much Yet the anatomical relations were such that it evidently came from there I tried in every way to reduce it, but without success I was so certain that it was not the bowel but was omentum that I allowed 48 hours to go by in order to watch the symptoms At the end of 48 hours, and after various attempts at reduction, on Thursday I cut down on it and found, coming out of a very small opening, a piece of strangulated omentum The condition of the patient was such that it was with great difficulty that we could stay in the room and operate on account of the stench from his vomiting He lived a great distance from my home, and possibly I did not operate early enough During the night the patient had a free stool, the first he had had for a week, the stercoraceous vomiting stopped, and for 48 hours he did well The patient is alive yet and has a fair show, but the vomiting has recommenced and he does not look very well

Now, how much of the omentum is injured? I cut off the omentum as close as I could, pulled it out as far as I could before it was cut and tied it at the internal ring, and after tying it carefully with catgut I cut it off and put back the stump How much of that omentum is gangrenous behind that ligation? Of course the condition of the patient may be due to something else I introduced the finger right into the abdominal cavity, and there is no greater danger in making the incision in the middle line and stretching the opening from the inside carefully with the finger and pulling out the omentum to see what you are doing Our President told me that he once tied and cut off an omentum in an umbilical hernia The patient died and the post-mortem examination showed this omentum stretched and twisted around and strangulating the intestines, and of course the patient was not relieved by the operation The two cases taken together suggest the propriety in some cases of hernia that have stood for a long time, that were originally acute cases and probably omental, but where, from the length of time the hernia had existed, there was reason to suppose that there was considerable injury to the bowel or omentum, as to whether it would not be the best thing in these cases to open the abdomen carefully in the middle line, because you can reach down in the groin and, after stretching the internal and if necessary the external ring, bring out the strangulated parts and see plainly what is necessary to do

On examination of the specimen before you one thing is plainly discernible I was not mistaken as to the locality of the injury There are no certain ways of always knowing the exact portion of the bowel affected The lower part of the duodenum does not differ particularly from the upper part of the jejunum, but we know that the higher up we are the greater is the amount of folds of rugæ so called valvular conniventes that are around the bowel When I operated on this bowel it was nothing but a mass of corrugated folds on its mucous aspect, and though this specimen has been more or less changed in appearance by being immersed in diluted alcohol, you can see all along on the inner side the rugæ that are still present, showing about the only way that I know of to distinguish the upper part of the small intestine Of course the anatomical relations of the bowel differ in different persons However, from its appearance and location, I suspect that this specimen is a portion of the jejunum

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ARTIFICIAL RIPENING OF CATARACTS

Read before the Chicago Society of Ophthalmology and Otology

BY BOERNE BETTMAN, M D,
OF CHICAGO

This is a subject which has not received the recognition from fellow-colleagues that its importance deserves Only a few articles and comments, scattered here and there, can be found relating to the relief of persons having non mature cataracts The third number, Vol xl, of *Knapp's Archives*, contains a communication from the able pen of Prof Forster, of Breslau, entitled "On the Maturity of Cataract" Forster calls attention to the annoyances patients are subjected to who are afflicted with cataracts of slow development In many persons the process of degeneration extends over a period of months and years, leaving them in a helpless condition, and in many instances obliging them to forego the enjoyments of life and resign life supporting and profitable positions

So long as the cararact is not mature, an operation is contraindicated So long as the cortical substance is still firmly adherent to the capsule, extraction of the lens cannot be performed with perfect safety to the patient, for, as Forster correctly states, the remaining layers of cortical substance will imbibe aqueous humor, swell, and give rise to iritis and other dangerous complications In order to produce more rapid degeneration of the lens substance, he proposes trituration of the cortex The procedure consists of gently rubbing the cornea with the blunt end of an instrument, usually a strabismus hook or iridectomy forceps The pressure exerted upon the cornea is transmitted to the lens, loosening and splitting the still adherent and semi opaque cortical lens fibres These, in the course of days and weeks, become perfectly opaque The object of the operation has been accomplished, the cataract is mature I was very much impressed by Prof Forster's article, and resolved to try his method whenever occasion permitted I have used the expedient quite often, but have modified it to suit my individual tastes Instead of rubbing the cornea, I bring the pressure to bear directly upon the lens, by pressing against the capsule with a spatula, usually employed

to replace prolapsed iris I prefer this method to the one recommended by Forster for the following reason Trituration of the lens always follows an iridectomy After the escape of aqueous humor iris and lens move up against the cornea, the iris contracts and the pupillary field becomes small When the blunt instrument now is rubbed against the cornea the pressure, unless limited to the small pupillary area, will not only break down the lens fibres, but will subject cornea and the delicate iris tissue to an unnecessary irritation I therefore, as before mentioned, carefully pass the spatula into the anterior chamber, and if necessary behind the iris, and gently stroke and press the lens in any direction

Great care must be observed not to exert too much pressure, otherwise a dislocation of the lens might ensue The flat side of the instrument should always be held against the lens surface If tilted so as to bring the edge to bear upon the capsule, it no doubt would rupture the latter It is unnecessary to add that the strictest antiseptic precautions are religiously adhered to, and that the eye should be fixed in case the patient shows an unruly disposition This, however, is rarely necessary, owing to the anæsthetic effects of cocaine The distribution of opaque lens fibres and general breaking up of the cortex can readily be seen with the naked eye during the operation The mother of pearl sectors split, break into pieces, and are forced from their former positions In the course of a few days, yea, even after twelve hours, the entire appearance of the lens has changed Its anterior surface has now a uniform mottled appearance When illuminated it frequently resembles a bag entirely filled with a granular mass In successful cases it becomes entirely opaque, cutting off the yellowish reflex from the nucleus

This delicate manipulation has rendered me great service, and has rescued many of my patients from a condition which, to say the least, was unpleasant

The results of trituration of the lens are usually very marked, and in some cases may be termed instantaneous Vision equal to from $\frac{3}{200}$ to $\frac{4}{200}$, *i e*, counting fingers at from three to four feet, can be reduced to qualitative perception of light in twelve hours In the majority of cases, in fact in every instance where the trituration has been thoroughly accomplished, the lens can be extracted in from three to six weeks after the preliminary operation During the removal of the opaque lens, the cortical matter escapes as a semi fluid, flocculent mass The pupillary field is easily cleared of cortical remnants, and the danger attributed to the lodgement of transparent particles of lens substance in the wound or on the iris, is entirely overcome

A few examples may suffice as illustrations

Case 1—January, 1883 Mrs S, æt 60 Left eye, nuclear cataract Mother of pearl sectors in cortex Amber colored nucleus Slight reddish reflex from fundus Counts fingers at five feet Right eye, incipient cataract, fingers at ten feet

June, 1883 Condition not materially changed Sight in left eye has decreased, fingers at eight feet Left eye vision perhaps a trifle less than in January The patient being very anxious for an operation, I proposed preliminary iridectomy and trituration of cortex She readily consented Operated June 5 June 25 I lens, to all appearances, perfectly mature July 15 extracted the lens Recovery rapid and uncomplicated V = $\frac{20}{30}$

Case 2—Sept, 1886 Mr H, contractor, æt 62 Immature cataract, both eyes Unable to walk about, since two years, without attendant Vision, both eyes, counts fingers at four feet Nuclear cataract Reflex from fundus dull red

Oct, 1886 Iridectomy and trituration of cortex, right eye Six days later cannot count fingers, only able to discern movements of hand I extracted the lens three weeks after the first operation The lens and cortex were easily removed On the fourth day I found my patient out of bed playing cards He left the hospital two days later with vision equal to $\frac{20}{30}$

Case 3—Under observation three years Immature nuclear cataract, both eyes After much persuasion he yielded to my frequent demands and permitted me to mature the right lens Vision before operation, counts fingers at a distance of three feet Twelve hours later nucleus no longer visible, covered by a layer of white opaque cortex No iris shadow Removal of lens and subsequent recovery, with good vision, after a lapse of three weeks

The conclusions arrived at in this paper are as follows The operation is a feasible one It is easily executed There is no danger accompanying it Its results are always marked and rapid The subsequent removal of the lens is made more facile, and danger from secondary complications after extractions are greatly lessened

Central Music Hall

MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS —In regard to tuberculosis of bones and joints (see preceding numbers of THE JOURNAL) Volkmann goes on to say

27 Wounds from operations on joints and bones often become tuberculous before perfect healing is accomplished, fistulas and drainage openings fill with fungous granulations, parts of the wound already healed re open, and new tuberculous abscesses form In such cases very energetic treatment is to be recommended, renewed scraping out, cauterization with the thermo cautery, wide incisions, and particularly tamponning of the open, perfectly cleansed wound with antiseptic gauze (particularly iodoform and sublimate gauze) The last measure is probably the most effective, and in the most severe cases should not infrequently be put in practice immediately after the first operation But I do not consider it advisable to carry the principle of open treatment of wounds too far, since we often get primary union after these operations

The main thing, however, is not to wait too long for the second operation in tuberculous recurrences, in order to prevent the disease gaining too much

ground, and to interfere immediately when a new relapse appears It is often necessary to make as many as 4 or 6 operations, and more, at intervals of a few weeks, always narrowing and circumscribing the diseased area, in order to get a perfect and permanent cure

28 It seems that the operation for joint, and particularly for bone tuberculosis, in consequence of the entrance of tuberculous virus into the opened blood vessels, sometimes gives rise to the development of an acute miliary general tuberculosis (most frequently running its course with basilar meningitis)

29 It has been a well known fact, since the clinical types formerly known as tumor albus, atheroma, Pott's disease, spina ventosa, etc , were first recognized, that these affections even in the graver cases have often terminated in spontaneous recovery, and that the affected persons have reached advanced age, notwithstanding the more or less impaired mobility and function of the affected limbs, the cicatrices of which show the gravity and extent of this process As all these disturbances represent only varieties of tuberculosis of bones and joints, it is entirely useless to discuss the possibility of their spontoneous recovery

30 *Tuberculosis of tendon sheaths* appears partly as diffuse fungous affections of the sheaths, partly as solitary knots (isolated tubercles) Since the tendon-sheaths are generally situated close to the joints, it is necessary to warn against confounding this affection, when a fistulous opening is established, with caries of the joint or affections of the bone The treatment consists in cutting away the diseased sheath, scraping out, etc

31 *Tuberculosis of Lymph Glands* —In all the tuberculous affections thus far mentioned, the lymph glands that derive their supply from the diseased region may be infected, and become tuberculous This affection, earlier called scrofulous inflammation or cheesy degeneration, is a genuine tuberculosis The susceptibility of the lymphatic glands of the different regions of the body to the tubercular virus, is, however, very different The glands of the neck are by far the most frequently affected, and then those of the elbow, less frequently affected are those of the axilla, and most rarely those of the popliteal space and of the groin It is a rare exception that tuberculosis of the inguinal glands is found, even in the gravest tuberculous affections of the bones and joints of the foot

32 Very frequently, however, do simple hyperplastic, irritative and inflammatory swellings of the glands, such as accompany inflammatory and catarrhal processes of the skin and mucous membranes (and known as sympathetic or cosensual), later becomes tuberculous, when a certain constitutional disposition (scrofulosis) and hereditary infection is present The glands do not subside when the affection that caused them to swell disappears, they become larger, caseate and soften, and examination after extirpation shows a true miliary and bacillary tuberculosis This process, scrofulosis of the lymph glands, is most frequently noticed after primary affections that themselves are regarded as scrofulous, as, for example, in the case of glandular swellings after skin eruptions, chronic catarrhs, blenorrhœas, etc

33 How far cheesy deposits not belonging to tuberculosis (not bacillary) may exist in the lymph glands is not yet decided with sufficient certainty

34 Tuberculous lymph glands are best removed with the knife, and where we have to do with glandular lumps (Lymphdrusenpakete), as is usually the case, these should be removed on the same principles as the affected axillary lymphatic glands in a case of carcinoma of the mamma Scraping out the soft tuberculous glands with the sharp spoon is insufficient, since there still remains the diseased capsule of the gland, at least, and generally also the swollen and infected but not yet soft lymph glands in the neighborhood, and they will cause a recurrence It is not always possible, however, to avoid the scraping out

35 How far arsenic used internally may be effective in tuberculous (scrofulous) swellings of lymph glands, can be decided only by further observations —*Langenbeck's Archiv*, Bd 33, Hft 1

MODE OF FIXATION OF THE SCAPULA AND FRACTURE OF THE CORACOID PROCESS —At the meeting of the Royal Medical and Chirurgical Society on November 8, MR ABURTHNOT LANE read a paper on this subject He showed that in extreme flexion of the shoulder joint the scapula undergoes a movement of rotation upon an axis whose general direction is obliquely inwards and forwards, and that this rotation is abruptly limited by the impact of the coracoid process upon the under surface of the clavicle He illustrated the manner in which the frequent performance of this movement under the influence of considerable strain determines in such laborers the development of a coraco clavicular articulation, the mechanism of which he had already described in the Guy's Hospital Reports, 1886 He then referred to the very great difficulty which is usually experienced in breaking down adhesions between the humerus or scapula, these adhesions being in most cases the result of inflammation The difficulty arose from the inability to fix the scapula He showed that the scapula can be firmly fixed by flexing the shoulder joint completely, the coracoid process and clavicle being held forcibly in apposition, and that when the scapula is so fixed against the clavicle the humerus can be rotated forcibly upon its own axis, and can be completely adducted and then abducted very considerably without the humerus being accompanied in its movements by the scapula In this manner all adhesions between the two bones can be readily broken down He then criticised the statements made by surgical writers that the coracoid process is always broken by direct violence, and referred to two cases quoted by the author of the article on "Fractures of the Upper Extremity," in Holmes' System, to prove the truth of the above assertion, which, he said, showed that the very reverse was true in this case, for the reason that when the shoulder-joint is completely flexed it is practically impossible to fracture the coracoid process by direct violence He also referred to the extreme inaccuracy of published statistics of the relative fre

quency of fractures of the several bones, and particularly of the coracoid process and acromion He had never found a single instance of fracture of the coracoid process in the dissecting room, but he had observed that fracture of the acromion occurred more frequently than fracture of any other bone in the body MR W ADAMS agreed with the anatomical and physiological conclusions of the author, but he could not concur with the surgical conclusions, for in an ankylosed joint it would not be possible for the joint to be flexed The difficulty of fixing the scapula was not great He had never found any difficulty himself in fixing the joint firmly There often appeared to be plenty of movement, but this was of the scapula, and not really in the joint In a few difficult cases the ankylosis could not be broken down, and he should recommend that such cases be left alone MR CLEMENT LUCAS said it was new to him that the coracoid process could be fractured in the way Mr Lane had described, and the explanation was very easy to understand He agreed that fracture of the acromion process was more frequent than was commonly supposed Attempts at flexion of the shoulder would inevitably bring the coracoid process into contact with the clavicle, and so afford the necessary *point d'appui* MR HOWARD MARSH thought the explanation of fracture of the coracoid as likely to be the true one He considered that the difficulties of fixing the shoulder joint were not so great as the author had inferred In breaking down adhesions the use of anæsthetics was most desirable If the joint be really fixed as determined under anæsthesia, he should advise that the case be left alone, for any temporary improvement was most likely to be followed by increased ankylosis and increase of the joint disease The acromion may be apparently detached by the chronic rheumatic joint disease MR LANE considered that the changes in the acromion were more frequently due to injury than to a rheumatic process —*Lancet*, Nov 12, 1887

CARBOLIC ACID IN TRACHOMA —Starting from the supposition that trachoma is caused by a specific microbe (as was first pointed out by Sattler, and later on supported by independent researches of Michel, of Wurzburg, and E E Schmidt, of St Petersburg, see the *London Medical Record*, April, 1887, p 166), DR J SHTCHEPKIN, of Krasnoufimsk, has attempted (*Vratch*, No 42, 1886, p 479) to destroy the pathogenic agent by means of injecting into the palpebral mucous membrane two or three drops of a 2 per cent solution of carbolic acid Seven successive cases of follicular trachoma were treated by him after that plan In all of them, after two or three injections (repeated at intervals from three to twenty-two days), a complete and radical cure was obtained, trachomatous grains, however large, tracelessly disappearing in the course of a few weeks Since the carbolic injection is painful, a 2 per cent solution of cocaine should be instilled into the eye about five or ten minutes before the operation Lachrymation and redness caused by the latter disappear spontaneously in ten or twenty minutes Shtchepkin's successful results induced Dr L P Serebrennikova, a lady doctor attached to the Permgubernskaia Zemskaia Infirmary, to try so simple a method in nine trachomatous cases of her own As may be gathered from her short communication in the *Vratch*, No 32, 1887, p 614, she is far from being prepared to support his statements Follicles disappeared in only one of her cases—in that of a recent trachoma in an ulcer of 24, where the carbolic injection had given rise to intense local inflammation Even in this case the successful result is attributed by the author to the inflammatory process, and not to a specific (antibacterial) action of the drug In the remaining cases, the injection produced a more or less considerable œdema and other inflammatory phenomena, which in two cases attacked also the cornea, and intensified already existing pannus After the reactive irritation had been allayed, the conjunctiva was found to be in an exactly identical morbid state as before the treatment Hence the author gave up any further experimenting in that direction It is just possible that such a striking difference between the result of the two authors might, at least partly, depend upon a difference in the procedures respectively adopted While Dr Shtchepkin lays great stress on injecting into the most superficial layers of the mucous membrane ["it is the most essential condition," he says, "therein the operator's whole skill consists"], Dr Serebrennikova seemingly always injected into the submucous cellular tissue —*British Medical Journal*, Nov 12, 1887

ANTIFEBRIN IN THE FEBRILE DISEASES OF CHILDREN —HIDOWITZ reports the use of antifebrin in fifty three cases, including four of scarlatina, eleven of measles, eleven of measles with subsequent pneumonia, two of measles with tuberculosis, two of facial erysipelas, four of croupous pneumonia, two of lobular pneumonia, two of pleuro pneumonia, four of bronchitis, three of tuberculosis, four of follicular tonsillitis, three of gastricismus, one of acute intestinal catarrh An interesting fact is that at the end of ten or twenty minutes after the medicine was taken the temperature began to decline, and continued steadily until it reached its lowest mark After remaining at this point for a short time it began to rise again The rapidity with which the temperature declined seemed to depend not so much upon the size of the dose as upon the peculiarity of the child and of the disease Another observation was the very favorable effect upon the general condition of the children Those who had previously been restless and fretful became quiet and soon fell asleep In several instances the severe symptoms connected with collapse were quickly relieved after the ingestion of the medicine Scarlatina and erysipelas were more rebellious to the antipyretic action of the drug than any of the other diseases in which it was used, the temperature falling only a few tenths of a degree In pneumonia occurring as a complication of measles, in croupous and lobular pneumonia, in measles complicated with tuberculous affections of the stomach and intestines, the antipyretic action of the drug was prompt and energetic The pulse be-

came fuller, its frequency being diminished, though not always in proportion to the decline of the temperature, the respiration became deeper and more quiet The drug was given in the form of powder, and in doses of 1½ grains to children three or four years of age To older children, 3 or 4½ or even 7½ grains were given Small doses usually sufficed for poorly nourished children, the reaction being much more energetic than in more robust children As much as 30 grains were given in the course of a day The antifebrin never produced any perceptible effect upon the duration of the disease In some cases of croupous pneumonia its use was accompanied by profuse perspiration, with cyanosis of the face and the ends of the fingers —*Archives of Pediatrics*, October, 1887

SUDDEN ŒDEMA OF THE GLOTTIS AS A FIRST SYMPTOM OF CIRRHOTIC KIDNEY —B FRAENKEL reported an interesting case of this kind before the Berlin Medical Society The patient was suddenly seized with dyspnœa, and when the author saw him he was sitting on a chair and complaining of the want of breath A laryngoscopic examination showed swelling of the epiglottis and of the arytæno-epiglottidean folds As the patient was stepping into the carriage to be taken to the clinic, where tracheotomy was to be performed, he dropped dead At the autopsy intense œdema of the epiglottis and the arytæno-epiglottidean folds was found There was very marked contraction of the left kidney The right kidney was enlarged and in a condition of parenchymatous swelling The immediate cause of death was œdema of the larynx caused by the condition of the kidneys There was absolutely no effusion in any other part of the body The patient had never shown during life signs of any disease of the larynx The whole duration of the disease was not more than an hour The patient must certainly have suffered with albuminuria for some time, as the urine removed after death was rich in albumen In the discussion that followed, A Baginsky remarked that such a condition was observed also in the acute nephritis following scarlatina De Bary, of Frankfort, had been the first to describe acute œdema of the glottis as a first symptom in scarlatina nephritis Since then a few cases of the kind had been recorded —*New York Medical Journal*, Nov 19, 1887

TREATMENT OF RUPTURED AND DIVIDED TENDONS —DR C H WILKIN presents a table of thirty-two hitherto unpublished cases, of which twenty-eight were treated by suture, with good results in twenty-two and benefit in all He considers the injury in two classes, simple and compound While in the former almost all authorities seem to agree that rest and position are sufficient, yet it would seem that a better result and certainly closer apposition could be obtained by the use of the suture, of the propriety of the suture in the compound variety, there can be no question The plan of treatment recommended, is first thorough cleansing of the part and irrigation of the sheath of the tendon with a 1–1000 bichloride solution—except when the knee-joint is involved, when it should be 1–5000—by means of a small English catheter with a syringe attached, cocaine anæsthesia, and the use of silk worm gut suture two sutures being necessary in the average tendon, one being carried transversely through the tendon and the other antero-posteriorly —*Annals of Surgery*, August, 1887

OIL OF TURPENTINE IN DITHTHERIA —ROSE, of Hamburg, has treated 58 cases, with a mortality of 5 per cent, as follows He gave oil of turpentine three times a day in teaspoonful doses, mixed with spirits of ether—℥iv of ether to 1 teaspoonful of oil of turpentine A teaspoonful of a 2 per cent solution of sodium salicylate was also given every two hours Externally an ice bag was used, and gargles of a 1 per cent warm solution of chlorate of potassium This treatment gave the following results

1 Rapid lessening of the pulse rate and of the temperature, 2 Rapid alleviation of the subjective symptoms, 3 Shortening of the duration of the illness, 4 No exacerbation of the local process after the first dose of turpentine, 5 Only once was there danger of suffocation, and tracheotomy was done

Rose thinks that pencilling the throat as done in private practice, is generally useless He uses great caution in pushing the turpentine in anæmic cases, and in patients with weak hearts, and excessive cardiac action, from any cause, was carefully treated The food given in his cases consisted of bouillon, old port wine and milk, and ice and aerated fruit juices were given to quench thirst The turpentine was discontinued when the patient was free from fever In ordinary cases doses of from 3 to 5 drachms were used, and no intoxication was seen In one case paralysis occurred, but the patient recovered under the use of chlorate of potassium —*Therapeutische Monatshefte*, October, 1887

PHYSIOLOGICAL ACTION OF OIL OF TURPENTINE —At the close of an article on this subject DR HOBERT AMORY HARE gives the following summary

1 The oil of turpentine in small doses, resembling those ordinarily given in practical medicine, produces an increase in the number of the cardiac beats due to a direct stimulant action on the heart

2 In larger doses it produces distinct slowing of the pulse, due to a stimulation of the pneumogastric or inhibitory centre

3 That its influence on the vaso motor system, if at all, is very slight, either with large or small doses

4 That poisonous doses (5 c c to 10 c c) (ℳ 80 to 160) produce death by cardiac failure when injected directly into the jugular vein

5 That the drug in small doses increases reflex action somewhat, but in large doses decreases it, the increase being due to a stimulation of the spinal cord, and the decrease due to depression of the sensory side of the cord and afferent nerves —*Medical News*, Nov 19, 1887

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SATURDAY, DECEMBER 3, 1887

HEART PUNCTURE IN CHLOROFORM NARCOSIS

The last contribution to the subject of cardiocentesis, and the most complete, is a paper read by DR B A WATSON, of Jersey City, at the last meeting of the American Surgical Association. The paper is all the more valuable from its containing the details of sixty experiments made on dogs, forty of the animals being injured and twenty uninjured at the time of the experiments. The experiments were made for the purpose of determining the possibility of arousing the heart into action, after its action had been stopped by chloroform narcosis, by the introduction of a needle into the organ. It will be remembered that the operation of cardiocentesis was first proposed and performed by Dr B F Westbrook, of Brooklyn, in 1882, though previous to this time, the heart had several times been punctured unintentionally without bad results.

In all these experiments commercial chloroform was used. In the first 50 cases the chloroform was administered rapidly, and atmospheric air was, so far as possible, excluded from the animals, in the remaining 10 cases the chloroform was given slowly, and contained a large percentage of air, in the first 50 cases, then, there was a certain degree of asphyxia with the narcosis. In the last 20 cases artificial respiration was used with special care, the animals in these cases having suffered no traumatism. Of 47 cases in which the cessation of the heart's action and of respiration as the result of the narcosis was noted, in 44 the heart's action ceased before respiration, in 1 case the heart continued to pulsate one minute after respiration had ceased, in 1 case the heart pulsated for thirty seconds after the animal had ceased to breathe, and in 1 case respiration and cardiac action ceased at the same time. In 34 experiments chloroform was administered rapidly, and without the admixture of atmospheric air, the average continuation of respiration after the cessation of cardiac action was nearly forty one seconds, the maximum being two minutes and the minimum five seconds. In the 10 cases in which chloroform was administered cautiously, and with a free admixture of atmospheric air, there was not a single case in which the heart stopped before the animal ceased to breathe.

The punctures made in the 60 experiments were as follows: In the right ventricle, 38, left ventricle, 6, right auricle, 6, superior vena cava, 3, inferior vena cava, 2, apex of the heart, 2, not stated, 1. The resuscitations that followed these punctures were: right ventricle, 9, right auricle, 1. The first 40 experiments gave 4 recoveries, and the last 20 gave 6, but it is to be remembered that the first 30 dogs were suffering from traumatism, and that the experiments were made for the purpose of determining the *effects* of cardiocentesis, while the experiments in the last 20 cases, were made for the purpose of showing the efficiency of cardiocentesis, when used in these cases in connection with artificial respiration.

In regard to the effects of a puncture of the heart in chloroform narcosis, a study of the paper shows that of the 60 punctures in two only did the heart fail to respond, the puncture being made in one of these cases one minute and thirty five seconds after cessation of cardiac action, and the needle was so firmly held by the tissues through which it passed that it could not be swayed by the feeble pulsations of the heart, and in the second case the puncture was made four minutes after cessation of cardiac action, and one minute after cessation of respiration.

The report shows that needle puncture alone was sufficient to arouse the heart to action in 22 cases, the average time that had elapsed between the heart stop and the puncture being one minute and twenty seconds—the longest period being two minutes, the shortest one minute. In two of these cases the action excited continued, the other functions were reestablished, and the animals recovered.

A most important question is, Can the heart that has ceased to beat be excited to action by needle puncture? A careful reading of the details of the experiments will leave no doubt that in the 22 cases the hearts's action had really ceased, and that the puncture did not simply stir up to increased action a heart that had almost stopped. In almost all of

the experiments it was noted that cessation of the heart's action commonly occurred before cessation of respiration, but when the needle previously introduced into the heart this order was reversed

Should the puncture be carried into a cavity of the heart in order that blood may be abstracted? From the conditions found after death from chloroform narcosis "it may be rationally claimed that blood may be advantageously drawn from the right side of the heart in chloroform narcosis I am, likewise, fully assured that this procedure is not only theoretically correct, but also entirely practical and highly advantageous What more rational treatment can be adopted in cases of chloroform narcosis than the puncture of the heart and the abstraction of blood " In cases in which respiration and the heart's action have ceased the urgent indications are to restore these functions as soon as possible, and the indications are so urgent that a resort to measures that would not otherwise be justifiable may be said to be demanded The only deaths in Dr Watson's experiments that may be fairly charged to the puncture are those due to the puncture of the vena cava Punctures of the auricles were sometimes followed by considerable hæmorrhage into the pericardial sac, and such wounds are by no means free from danger "The punctures made into the ventricles are not attended by any hæmorrhage from the interior of the organ, but there are occasionally found a few drops of blood within the pericardial sac, which has been poured out from some wounded cardiac vein " Dr Watson draws the following conclusions in regard to cardicentesis in chloroform narcosis

1 Puncture of the heart, especially the right ventricle, stimulates muscular contractions and may be advantageously employed in the treatment of this morbid condition

2 The best results are obtained when abstraction of blood from the cavity of the ventricle is combined with the stimulating effects produced by the entrance of the aspirator needle

3 Puncture of the right ventricle is a safer and more efficient operative procedure than puncture of the right ventricle

SECTS AND SCHOOLS OF MEDICINE

The New York *Medical Times* (homœopathic) for November, 1887, says editorially

"The two greater so called schools in medicine seem to be failing entirely in their duties to each other and to the public! There has been and is now a regular system of boycott going on in both of them toward such of their associates as dare to have opinions respecting ethics at variance with what these schools choose to dogmatically lay down as guides in their relations with one another

"In practice the great majority of both these bodies are in substantial accord so far as the use of therapeutic means is concerned, that is to say, all assert their willingness to adopt that means which will best subserve the interests of their patients

"In the Old School class, many seem afraid to employ small doses, even when confident of their superiority, for fear of the homœopathic designation, and the homœopathic class fights shy of the large dose, even when absolutely called for, for fear that they may be termed allopaths! Both these sects are thus doing themselves and the public an injury, and all on account of the sectarian designation

"How much better it would be for both of these parties to come out honestly and squarely and admit that there are occasions when small doses would be best, and that there are other instances when the larger, even the largest, may be required, depending entirely upon the effects to be obtained, and the mode of selection will be easily admitted, as it will be determined also by the end desired The Old School undoubtedly occupies the higher relative plane in the controversy by being free from sectarian designation, but still as a body it has a great responsibility at this juncture, and one that it should not shirk nor attempt to temporize with

"It is highly improper to use the expression 'practicing both ways,' and if there were no sectarian designation there would be no opportunity to make such a statement!"

Exactly so! And if there were no parties arrogating to themselves a "sectarian designation" or attempting to delude the people into the belief in "Old Schools" and "New Schools," there would be no occasion for any "system of boycott" And if the editor of the *Medical Times* is correct in saying that "in practice the great majority of both these bodies (regular profession and the homœopathic) are in substantial accord so far as the use of therapeutic means is concerned," why continue to use a "sectarian designation" for either? He justly concedes the fact that what he calls the "Old School" is "free from a sectarian designation," and as that embraces eight tenths of all the practitioners of medicine in this country, why do not the remaining two-tenths abandon their antiquated pretensions concerning special designations and special schools, and be content with the fair title of Doctor of Medicine? The matter is entirely in their own hands They selected their own exclusive "sectarian designations," and they can abandon them whenever they please But so long as any number of medical men choose to designate themselves by a "sectarian" name as a *trade mark* for the public, they should not complain if all other medical men leave them entirely alone, so long as they adhere to such exclusive trade mark

YELLOW FEVER —Reports from Tampa, Florida, to November 23, state that during the preceding two days there had been 5 new cases of yellow fever and 1 death, although the temperature had been below the freezing point On the 24th no new cases and no deaths, and the nurses from Savannah and part of those from Key West had been sent home The whole number of cases reported during the progress of the epidemic is 380 and 71 deaths

APPOINTMENT —The Chair of Surgery in the Rush Medical College, made vacant by the recent death of Professor Moses Gunn, has been filled by the appointment of C T Parkes, M D , already well known as the Professor of Anatomy in the same College

SOCIETY PROCEEDINGS

OBSTETRICAL SOCIETY OF PHILADELPHIA

Special Meeting, September 17, 1887

THE PRESIDENT, THOMAS M DRYSDALE, M D , IN THE CHAIR

DR GEO GRANVILLE BANTOCK, F R C S EDIN , London, England, made some

REMARKS ON THE REMOVAL OF UTERINE FIBROIDS BY ABDOMINAL SECTION

He said that the tumor that formed the text for his remarks had been removed the day before, from a single woman æt 36, a patient of Dr Joseph Price, and weiged between 5 and 6 pounds At first sight he had doubted the propriety of operating, because there seemed to be no indication for interference beyond the rate of growth of the tumor, and because the patient, as he had been assured by Dr Price, very much minimized the extent of her sufferings The matter was thoroughly explained to her, the danger of the operation was made clear, and it was pointed out that if operation were necessary at some time, she would never be in a more favorable condition for it The patient was aided by her mother in coming to a decision, and he was struck by the readiness with which they both decided in the affirmative This was so far fortunate, for it would be seen that the tumor had in its upper part already undergone cystiform degeneration (here an incision was made into the cyst before the Society, giving exit to over half a pint of a thin sero sanguinolent fluid) He was happy to say that the condition of the patient was most satisfactory

Dr Bantock then proceeded to the general subject of the removal of uterine fibroids by abdominal section, which he said was a very important one He pointed out that operators were to be divided into two schools, the one preferring to treat the pedicle by the intra peritoneal method, the other preferring the extra peritoneal The advocates of the former based their arguments on the success which has resulted in the operation of ovariotomy, from the introduction of the intra peritoneal ligature of the pedicle But it was scarcely necessary for him to show how fallacious such reasoning was, for the conditions were so dissimilar It was true that there were many different forms of ovarian pedicle it might be large or small, long or short, broad or narrow, thick or thin, but they were all essentially of the same character, and capable of being more or less easily secured by ligature, which might be confidently relied on if properly applied On the other hand, the uterine stump is very different It is composed of muscular fibre, white and yellow elastic tissue, forming a structure so peculiar that, under the pressure of a ligature tied with as great a strain as it will bear, it yields before the compressing force to such an extent that in a few hours the ligature may be quite loose This occurs even when the pressure is exerted with the aid of a screw, and he pointed out to those who were present at the operation that at the first tightening of the screw there was complete arrest of the bleeding for the time, but that at intervals of ten or fifteen minutes the screw would take a turn or more with facility In this way an amount of constriction was attainable which, if attempted at once, would probably lead to the breaking of the wire or the cutting of the tissues He had just come from the meeting of the American Gynecological Society, where he had read a paper on the subject of the treatment of the pedicle, and where the opposite school was so well represented in the person of Dr Martin, of Berlin, and he had the satisfaction of feeling that, for the time at least, he had established his position

Now the pedicle in this operation varies very much, not in the nature of the tissues forming it, but in the extent and manner in which the parts are involved Thus the tumor may spring by a distinct pedicle from the fundus, or some part of the free surface of the uterus In such a case the application of the extra peritoneal method is very simple, and his results have been uniformly good, for in thirteen of these cases, all the patients recovered On the other hand, of all the cases of this kind treated by the ligature and intra peritoneal method, five in number, only one was successful Moreover, he had attempted the method in several cases and had been obliged to resort to the extra peritoneal method after failure of the ligature, though preceded by compression with very powerful forceps When the body of the uterus is extensively involved in the growth, then matters may be very much complicated The broad and ovarian ligaments may be so lax that it is a simple matter to include ovaries and uterus in one encircling loop Such a case is little more difficult than an ovariotomy done with the clamp But the ovarian ligament may be so short on one side that it has to be ligatured separately That had to be done in the case that furnished the occasion for these remarks As a rule it is advisable, in such a case, to secure the uterus and other ovary first, to transfix the stump with the supporting pins placed across the ab-

dominal wound, to cut away the tumor, trim the stump, and then remove the ovary, lest in tightening the instrument any part of the ovarian pedicle should be pulled through the loop of the ligature In the case under consideration it was not necessary to observe this order, as the broad ligament on the left side was very lax, while the ovarian ligament was very short On the right side the ovary could be raised quite out of the pelvis Sometimes both ovaries are thus tied down and have to be secured separately The same precautions must be observed

But the disease may involve the whole body of the uterus properly so called Then we must make a pedicle, and this is the most difficult state of things to overcome It was for such a state of things he had devised his method of partially enucleating the body of the uterus and the lower portion of the tumor The large vessels of the ovarian plexus are secured on each side by two pairs of forceps or stout ligatures, the lower of each pair being placed an inch higher than the level of the proposed constriction Then the peritoneal investment is divided all round on a level between the upper and lower forceps, and reflected downward toward the cervix and nearly to the level at which the loop of the serre-nœud is to be applied In doing this it is necessary to seize the peritoneal edges with forceps placed at intervals of about an inch When the reflection is completed these instruments are collected and raised up and the wire loop is applied outside of the peritoneum Sometimes, and especially when it is desirable that the patient should not lose much blood, it is well to throw an elastic ligature around the uterus and broad ligament as soon as the division of the peritoneum is effected Applied in this way, it serves to draw in the broad ligaments toward the uterus and to enucleate the tumor It is to be removed as soon as the serre-nœud is applied—above or outside it, of course In this way an inch or more in the length of the pedicle may be gained Remember, that in this method it is necessary to have the stump so long that the whole of the constricted portion must be outside the peritoneal cavity, in which position it is to be retained by the transfixing pins which pass through the stump just outside the wire loop and rest on the parieties on each side of the wound While the peritoneum is being reflected, the tumor should be held up by the assistant, and thus it rises gradually out of the pelvis with the pelvis with the uterus One precaution to be observed very carefully in these cases, is to transfix with the pins *before* cutting away the tumors He once lost a patient through the non-observance of this precaution The last steps are to cut away the uterine tissue to within a quarter of an inch of the pins, and to trim the loose peritoneum by cutting it away to within half an inch of the loop and then stitching it from opposite sides across the surface of the stump to hold it well together Before closing the wound give the screw a final turn if it will allow of it Remember that the distal portion of the stump must slough off, that it is desirable that the amount of this tissue should be as small as possible, and that it is necessary to keep it out of the peritoneal cavity You may have heard great stress being laid upon the character of the mucus in the uterus and cervical canal, and you may have observed great care used in wiping it away and setting aside the sponge employed for the purpose One operator has gone so far as to pass an iodoform pessary down the canal for the purpose of disinfecting This is a practice with which he has no sympathy, nor is it rational or founded on any sound reasoning He looked on it as a bugbear and regarded it as a means of withdrawing attention from other and more important matters of detail As to comparative results, Martin had just reported 84 cases with a mortality of 25, while Dr Bantock was able to point to 72 cases with only 12 deaths

Listerism—There is some misapprehension of the value of terms Some operations are termed *aseptic*, but the result only can prove any operation to have been aseptic All operations are or are not performed upon an antiseptic method Dr Bantock has now discarded all antiseptic agents When Listerism was first introduced, he used it in all its details, and continued to do so until he lost a patient, and had others affected by, what he felt sure was carbolic poisoning An easy and sure test for this is the absence of sulphates from the urine In one case of carbolic poisoning the temperature rose to 107° and the patient was almost moribund, by means of wet sheets and ice packing the temperature was brought down to normal in eight hours and she recovered In one fatal case the kidneys were found congested, there had been acute suppression of urine After this experience he gradually reduced the strength of the carbolic washing fluid to 1 per cent Coincidently the proportion of sulphates in the urine increased and there was an absence of high temperature and other symptoms of hitherto unknown origin Now, as 1 to 40 is the weakest solution that can be useful as a germicide, a 1 per cent solution could serve no good purpose, and the carbolic acid was omitted altogether Afterward he tried doing without the spray and results steadily improved Of his last 100 ovariotomies only three had been lost, and of the last 78 only one But ovarian statistics do not apply to uterine operations

DR W H PARISH was present at the operation the day before, and it was a complete illustration of what is necessary in all operations *First*, in saving blood, Dr Bantock was very careful to use hæmostatic forceps to secure every bleeding point in the abdominal wound before opening the peritoneum The same economy of blood was observable in every step of the operation Great care was also taken to avoid shock from cooling the intestines by the contact of air and consequent evaporation Large flat sponges were pressed in to cover the intestines and prevent their escape or the entrance of blood or discharges into the peritoneal cavity He is extremely careful about the cleansing of his sponges before re introducing them into the wound *In* placing sutures, he first passed several silkworm gut stitches close to one another near the stump After the wound was entirely closed it was covered with clean absorbent gauze, a pile of this was placed over the stump The whole was secured with a cotton binder,

using no adhesive plaster So while using no germicide at any time, every care was taken to make the operation an aseptic one Would Dr Bantock consider it safe to transfix, ligate and drop the pedicle in case of a uterine fibroid having a thin pedicle as long as a finger? Dr Parish had done so on one occasion and the patient died

Dr Bantock replied that a uterine fibroid with a finger like pedicle he had never seen He has observed none smaller than half his wrist He thinks the extra peritoneal method safer in every case

Dr. Longaker made some remarks on securing the peritoneum over the base of the stump, and asked what kind of suture Dr Bantock preferred for that purpose?

Dr Bantock said that any kind of suture would do, it was merely to secure a neat stump that would not spread out over the wound He prefers fine silkworm gut for sutures He introduces his needle from within, close to the edge of the peritoneum, and makes sure of a hold in muscle or aponeurosis and then through the subcutaneous fat and skin, to secure a firm hold and prevent future hernia.

(To be concluded)

CHICAGO MEDICAL SOCIETY

Stated Meeting, October 3, 1887

The President, Wm T Belfield, M D, in the Chair

Dr F Henrotin, read a paper on

Resection of the Intestine for Fæcal Fistula

(See page 713,)

Dr D W Graham The method of treating the mesentery and of stitching the ends of the bowel together raises legitimate questions for discussion, but if this case proves anything it proves that the doctor was correct, although he deviated from what is generally considered the best method I have never been able to see why a V-shaped piece of mesentery should always, and necessarily in exsection of intestine, be taken out Certainly it is safer not to do so, safer in regard to the establishment of the circulation in the bowel, and therefore ought to give better results The apparently superfluous fold of mesentery can be taken care of in some such way, as was done in this case, and rendered harmless In regard to the stitches, it is impossible to say whether the patient's chance of recovery would have been better with the Czerney Lambert stitch than the one which was used, the patient having got well, the inference is that this method is safe

I had an experience in opening the abdomen in strangulated hernia It was a case that had been strangulated for nearly a week The attending physician had etherized the patient on Saturday and reduced the hernia, apparently When I saw the patient on Thursday following, there was stercoraceous vomiting, very marked, great tympanitis and all the signs of obstruction and strangulation, yet there was no external appearance of hernia On consultation it was decided that the abdomen should be opened in the central line This was done at once, and on introducing my hand I found a knuckle of intestine in the internal ring On attempting to reduce it from within some force was cautiously used, more than I now think ought to be used when strangulation has existed any length of time This failing, it was decided to cut down upon the inguinal canal and approach the hernia from that direction The knuckle was found and released by the proper incision, was carefully examined and judged in a condition to be returned I am satisfied that in that case the bowel could not have been freed by traction from within without rupture The question raised, of attempting to reduce hernia by laparotomy and traction from within, was discussed not long ago by a London surgeon in one of the medical journals. I have no doubt that certain complications of strangulation can be better managed by laparotomy, but I am sure that if we attempt to reduce many ordinary hernia in this way we will get into trouble

Dr A B Strong I only wish to say one word in regard to the manner of suturing the intestine. It simply shows that the manner of suturing makes no difference so that you manage to bring the serous surfaces together The sewing together of all the coats of the intestine was something new, but the operator fortified that with a row of sutures bringing together simply the peritoneal coat, which I think was the essential thing Sutures through the entire bowel of course added strength to the gut. I must say in reference to the mesentery that I never could see any special reason for taking out a V shaped portion of it, it seems to me that the manner in which it was treated was preferable, as it would increase the strength of the bowel

Dr Henrotin, in closing the discussion said When I came to the mesentery it folded up so naturally that I had no hesitancy in putting in my stitches very carefully on one side only so as not to interfere with the circulation I allowed no stitches to go through and strangulate the mesentery I knew that if the mesentery was moved it would stretch the bowel and strain the stitches In regard to the stitches, Gregg Smith (who has just published a work on abdominal surgery) is the man who told me how to put them in It seems to me if you take a continued stitch and bring the serous surfaces together only, that it tears easily And when it is necessary to return the bowel at once, and the patient tosses about much in bed immediately afterwards, unless you take considerable of the muscular coat and make a firm union the stitches are liable to tear through. I had two or three of my serous stitches that were about a sixth of an inch in length tear through and I had to commence over again I would like to know one thing would the turning in of the bowel and the consequent lessening of the caliber have a tendency to produce stricture of the bowel afterwards? If not, I feel certain that this is the best method, and do not think there is much danger of stricture high up in the small intestine from such operations

DR ELBERT WING exhibited a specimen of

TUBERCULAR ULCERATION OF THE LARYNX

This specimen comes from a case that was posted at the County Hospital this afternoon, a man 35 years old, with chronic tuberculosis of the lungs For a long time he had had symptoms of tuberculosis of the larynx and the diagnosis was made by means of the mirror The only spot of special interest about the post was this larynx and the œsophagus Both lungs were considerably involved in tubercular infiltration and ulceration, with large cavities There was also tuberculosis with ulceration, of the intestines limited to the colon, and the hypertrophy of the glands of the mesentery There is one ulcer of considerable size at the base of the epiglottis on the left side between the epiglottis and the tongue The anterior surface of the larynx below the epiglottis clear down to the edge of the arytenoid cartilage is one immense ulcer, the floor is irregular, the vocal cords, both true and false, are almost entirely lost through ulceration and erosion There is also evidence of rather marked trachitis, which would be associated with such a case The mesenteric glands were uniformly enlarged, most of them the size of a small bean, and a point of interest in their location was that those that lay immediately along the bowel were the largest In looking up the subject I find no reference of any consequence to tuberculosis of the larynx, except in Eichhorst and Strumpell The latter says that in 25 per cent of the cases of tubercu losis of the lungs there is also tuberculosis of the larynx He says these statistics are vitiated because careful observations are not uniformly made and a great many cases do not come to the post mortem table Eichhorst quotes a writer, Williglk, who reports 1317 cases of tuberculosis examined in which 13 8 per cent had involvement of the larynx This man claims that 49 6 per cent of all cases of tuberculosis of the lungs have also tuberculosis of the intestines This specimen is of special interest because so large a surface is involved Theoretically, it is of some interest to remember that there may be ulceration of the larynx associated with tuberculosis of the lungs in which the ulcers are not tubercular

SUDDEN GLYCOSURIA UNDER GASEOUS ENEMATA

DR FRANK BILLINGS called attention to something that happened in a case in which he had been giving gaseous enemata for pulmonary tuberculosis The patient had been treated for about two months and has taken about fifty enemata Two weeks ago he suddenly complained of great thirst, and at the same time said he had to rise several times at night to urinate An examination of his urine showed a specific gravity of 1 040 Dr Billings did not know just how much he passed in 24 hours, but it was a great deal This glycosuria certainly occurred suddenly, and he thought that perhaps it might have some connection with the enemata In medical books we find it stated that diabetes has a certain relation to tuberculosis It may be the predisposing cause, or, conversely tuberculosis may excite diabetes He immediately stopped the enemata and placed the patient upon arsenite of bromine, and small doses of codeia Two days before the meeting the specific gravity was 1 025, and the patient does not rise at night to urinate

SUDDEN DEATH AFTER URETHRAL INJECTION

DR W T BELFIELD related an accident that happened to a member of the Society, and which is likely to happen to any one at any time A physician cut a slight stricture of the urethra about ¾ of an inch behind the meatus It was done under cocaine without trouble or pain The doctor had the patient come to his office every second day to pass a sound, and each time gave him an injection of a 4 per cent cocaine solution, about 2 drachms, before introducing the sound On the seventh day after the cutting the patient complained of being very nervous, had been nervous for several days and had not slept at night The sound was introduced that day under cocaine as before On the ninth day he returned, and an injection of cocaine was given The patient reclined on an ordinary office chair and the doctor turned away to procure his sound and warm it while the cocaine should exercise its influence on the urethra, in less than a minute after the cocaine was given the patient complained of dizziness and fell back on the chair Another physician in the outer office was called and together they did what they thought necessary, administering stimulants, and using a galvanic current, but in three or four minutes after the injection was given the young man was dead He was about 28 years of age, and had been in good health so far as is known At the post-mortem examination the body was thoroughly examined, the brain included, there was absolutely nothing abnormal found except that the kidneys were enormously congested, they were so blue that they looked like an ordinary spleen The cause of death is open to conjecture, probably the patient was suffering from uræmia, and any irritation of the urethra would have provoked the result, certainly death could not have resulted from cocaine poisoning, since sufficient time for its absorption and circulation had not elapsed, nor is it plausible to assume that there had been an accumulation of the drug from the previous urethral injections Doubtless an injection of distilled water would have provoked the same result Whether the urine had been scanty or albuminous the attending physician could not say

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SUFFOLK DISTRICT MEDICAL SOCIETY

SECTION FOR CLINICAL MEDICINE, PATHOLOGY AND HYGIENE

DR F I KNIGHT, CHAIRMAN

ALBERT N BLODGETT, M D, SECRETARY

Regular Meeting, Wednesday, October 12, 1887

(*Concluded from page 702*)

DR F W STUART read a paper on

A CASE OF SO CALLED VICARIOUS MENSTRUATION

The case which I am to report to night I saw at the Carney Hospital, from October, 1885, to March

1, 1886, during the terms of service of Drs J O Otis and J J Minot, and afterwards at the patient's home, until a few weeks before her death It was suggested to me that the case was very interesting, and that it might be well for me to report it, since I had followed it longer than any other physician I am indebted to Dr Minot for the use of the careful notes he made during the time the patient was under his care

I first saw the patient in October, 1885 She was then fifteen years old, and the following history was obtained Her grandfather, father, four paternal uncles and aunts, and two paternal cousins, had died of phthisis, and two more cousins were then "in consumption" The patient had never been strong since 3 years old, had vomited often, and had frequent "sick headaches" She was always feverish, vomited every night if she ate a hearty supper, and so had been accustomed to limit that meal to a glass of milk The bowels were always constipated, and she took pulv glycyrrhiz co continuously She frequently had sore eyes In 1882, she had typhoid fever

November 24, 1884, the catamenia appeared for the first time, lasted two days, were unattended by pain, but since that time the patient had never menstruated At the next catamenial period, she vomited everything she ate for two or three days, and the vomiting was repeated at each period, when she also had a feeling of weight and soreness in the lower abdomen At times, she had a pain in the right ovarian region, when a "bunch" could be felt there, though both pains and "bunch" occurred at non-menstrual periods She had no trouble with micturition In May, 1885, she had an epileptic fit According to the hospital records, she was treated, in April, for a naso pharyngeal catarrh, where a note is made, stating that a few days previously she had had an hæmoptysis, though in October she did not refer to it From December, 1884, to June, 1885, she vomited only at catamenial periods, never between In June, the vomiting began to be much more frequent and severe, anything but milk being vomited In September, after long vomiting, she raised a little blood, and this was repeated several times She complained of great pain immediately after eating, and vomited without any signs of nausea appearing

Such was the history of the case up to October, 1885, though there seemed to be a large element of hysteria in the case, and her truthfulness as regards symptoms appeared rather doubtful The patient was pale, anæmic, and poorly nourished, but physical examination was absolutely negative, with the exception of localized tenderness in the epigastrium The diagnosis, it was thought, rested between gastric ulcer and vicarious menstruation She was put on pancreatinized milk, and all went well until the end of the month, when the usual symptoms appeared, and even this milk was not retained She now visited a "clairvoyant doctor," and afterwards a quack in New York City, who told her she had an imperforate hymen, which must be cut She wished advice as to the cutting, but examination showed a normal hymen, as was to be expected from the history of a previous menstruation On December 24, she visited the hospital after one of her attacks, and from that time up to March 1 careful notes of her condition were kept On that date, December 24, she stated that, during the attacks, she had pain in her stomach as soon as food was swallowed, and this pain increased, and was accompanied by a loud, rumbling noise She never belched wind, or passed any per rectum After two or three hours of this pain she vomited, but evidently not undigested food She never vomited directly after taking food, nor in less than two hours after its ingestion After vomiting, the pain gradually passed away in about one hour

December 22 She was sitting quietly, began to choke and then raised some blood, less than a teacupful she said She did not vomit at all, but coughed

On the night of December 23, and the morning of December 24, while fasting, she raised dark, thick blood She had no cough, usually ate no breakfast, has had night sweats She sat up late nights, ate very little, danced a good deal, and slept poorly Examination, superficial, owing to the recent hemoptysis, showed the patient to be small, poorly developed, pale and anæmic No enlarged glands were to be seen or felt Auscultation gave an almost puerile breathing, and expiration slightly prolonged There was localized tenderness, limited to a small area over the epigastrium She was told to take peptonized milk every two hours

December 25 She raised blood four times Each time she first began to choke, and then raised the blood, which was greater in amount than at any time before She had considerable cough, complained of pain in the lower abdomen The peptonized milk was retained She was given ext ergotæ fl Her mother stated that the vomiting occurred at about the 25th of each month, and lasted one week She did not think the patient vomited in the intervals The blood seen before the last attack was mostly streaked through the vomitus, but, at the last attack, was as stated by the patient

December 31 The patient said she felt better There had been no vomiting, and no raising of blood since the 25th Her weight, which had been ninety-two pounds, was now reduced to eighty seven pounds Examination gave a percussion note a little higher in the second interspace on the right than on the left side There was also a slight difference in the back, between the scapula and the spine, the left being the higher Auscultation gave nothing abnormal Heart normal The lower thorax was long and pointed There was marked tympanitic resonance on the left side of the upper abdomen There was nothing to be seen or felt There was tenderness in various spots, in the epigastrium, about the umbilicus, and about the edge of the ribs on the left side She was given malt and the syrup of the hypophosphites

January 12 She stated she had been thirsty of late, and had vomited after drinking much water

January 15 She had severe pain for two hours

after eating some turkey, and then vomited, but the pain lasted about three hours longer

January 19 Seemed better, had not vomited or raised blood in the few days past She had, from the vagina, a discharge of a yellowish matter, streaked with blood She complained of pain in both iliac regions

January 20 Was unable to urinate, and a sitz bath and spts ætheris nitrosi were given

January 22 Vomited a little after a breakfast of beefsteak, but the vomitus consisted only of bile Urination was all right

February 3 She stated that she had been away on a visit, and, at night, was laughing, when she began to cough, and raised a tablespoonful of dark, clotted blood She did not vomit During the night she awoke with a "pain in her belly," and the next morning, after taking some milk, she vomited The vomiting continued all day, but the next day the patient was better, complaining only of a sharp pain in the lower abdomen She had more discharge from the vagina than formerly An examination of the chest showed nothing abnormal The patient was referred to the gynæcologist, who reported everything normal about the external genitals, and would examine further only under ether From the history he obtained he was inclined to think the case one of vicarious menstruation

February 19 The patient returned, and stated she had been quite well up to the 11th, when, after going to the city, she vomited sour food, but no blood On the 12th she was better, but vomited again on the 13th, up to which date she felt well, but then she had pain in both groins, so severe that she was doubled up Before and during the pain, she had passed bloody urine during several hours, and at frequent intervals afterwards, she passed a urine which was pale, clear and not bloody, but in small quantities For a few days, the pain returned in the afternoon, though she passed no blood

On this date, the 19th, the patient said she felt well, though she was weak, and had no appetite She said she always had diarrhœa during the attacks of vomiting, but at other times, she had marked constipation Walking and riding in the horse cars, she said, always brought on the pain, though she could ride in a carriage without experiencing any trouble She was very nervous, easily startled, and said she had "nightmare"

On Feb 23 she presented no definite symptoms

I have alluded to treatment a few times, but have not intended even to outline it Symptoms were met as they arose, but the main object kept in view was to give a thorough course of tonics, which was done by the exhibition of iron, arsenic, extract of malt, and syrup of the hypophosphites almost constantly.

After March 1st the patient did not return to the hospital, and, indeed, discontinued treatment I was, however, interested in the case, and made weekly calls to keep myself informed as to her condition This did not seem to change much, though she grew weaker constantly, and coughs, night sweats, and loss of strength became the predominant symptoms Towards the end of April I again examined the chest, and found evidences of consolidation at both apices The patient now developed a fever, which remained for weeks at about 102 5°, diarrhœa of a very severe character set in, and the patient rapidly sank, and died in about two months

Unfortunately, no autopsy could be obtained

I feel some diffidence in giving my opinions regarding a case so difficult of diagnosis as this Still, I will venture to offer a few remarks concerning the diagnosis

In the first place, it is certain that the patient died of a florid form of phthisis I do not think that she had a gastric ulcer To be sure, there was vomiting, sometimes hæmatemesis, and localized tenderness, but, opposed to this, the patient never vomited until two or three hours after the ingestion of food, and the blood vomited only streaked the vomitus Beyond this, there were days when she retained hearty food, and the gastric symptoms were limited to certain periods

I believe, then, we are to consider three affections as possible during the earlier part of the trouble, namely, vicarious menstruation, the hysteric gastrique of the French writers, and phthisis

No one of these meets the case satisfactorily The manner of vomiting, and the character of the vomitus—partially digested food, streaked with blood—suggest the hysteric gastrique But later, there was hæmoptysis, that is, the blood was coughed up, not vomited, came probably from the respiratory, not the digestive tract

Vicarious menstruation may occur from both tracts, but there had been normal menstruation, and the absence of the menses was only to be expected in one so poorly developed and anæmic Again, the vomiting of blood was only a comparatively late symptom, and, notwithstanding the patient's assertions, no direct connection with menstrual trouble could be definitely established In December she coughed up blood, but did not vomit, in January she vomited, but raised no blood in any way, and there was an apparent attempt at menstruation, and in February there were no definite symptoms Both of these affections are extremely rare, and both offer such difficulties in the way of diagnosis, that it is only after a very careful study of the case that one is warranted in making such a diagnosis Either may have obtained and been followed by phthisis

It is a question with me whether there was ever any disease beyond phthisis To be sure, it is hard to reconcile all the symptoms of this patient with this view, especially when such careful observers as the gentlemen mentioned failed to find signs, but it is the one disease which every one connected with the case constantly looked for, and it is the one which caused the patient's death The uncertainties of the case prevent an absolute diagnosis, and were a constant source of annoyance in treating the case

DR BLODGETT said I would like to ask if any medical person witnessed the expectoration of blood at any time?

DR STUART. No, it was something that we at-

tempted to do, I gave notice to the mother to call me at any time that the patient raised blood My office was only a block from where she lived, but they never sent for me The mother was hysterical, as well as the girl, and we thought she had a little more than her daughter did That was one of the elements that was pretty hard to determine It was hard to say whether she vomited the blood or raised it by coughing She insisted that the vomitus was streaked with blood after severe vomiting That we could see ourselves She afterward said she coughed up thick blood, that we never saw

DR. J L FOLEY asked whether the blood were dark or scarlet?

DR STUART replied that the patient said it was dark If it were from the air passages of course we would expect it to be bright

DR BLODGETT said I have had the opportunity of examining three cases where the presence of blood was important One of these was a case where the blood was expectorated by the patient, to the great alarm of the family and the consternation of the physician, who could find no legitimate cause for it It was finally made evident that the patient wilfully and voluntarily produced the blood from somewhere within the oral cavity It was satisfactorily determined that the blood did not come from the stomach or lungs, but from some mucous tract above the œsophagus or trachea A second case which came under my observation was one in which it was believed by the medical man and by the patient that an actual hæmoptysis had occurred, in which the blood followed coughing and was produced in a fresh or comparatively fresh condition, although never frothy That was finally, by close study, found to be due to an oozing from the nasal or pharyngeal mucous membrane, which trickled down into the larynx, and then was coughed from the upper portion of the respiratory tract No symptoms have followed the accident, and they have for many months been carefully watched for Once or twice it has been noticed in other members of the same family, but it seems to be due to a peculiarity of the patient, and not to organic disease

The third case was one in which, absolutely, blood was lost in large quantities, sometimes in quantities estimated at from a teacupful to half a pint I have never seen the hæmoptysis going on, but I have seen the blood which was produced after the expectoration had ceased This blood was supposed to come from the lungs In consultation, a physician of great experience and eminence pronounced it blood of pulmonary origin On one occasion I was fortunate enough to see the blood which was formed in distinct coagulæ The nurse, who was competent, said that it was found in the mouth in that form, so that the finger had to be used to break up the clumps This showed that it did not come from the lungs, but from some other part of the body, and I came to the conclusion that it all came from the stomach The autopsy showed that it came from the exudation of blood through the wall of the stomach without ulceration There was no other source from which it could have been derived The lungs were diseased but there were no cavities, and no signs of a pulmonary origin of the hæmorrhages There was no crackle, which usually follows the effusion of blood into the pulmonary tract These three cases have been of interest as presenting three conditions, in each of which the expectoration of the blood was the principal symptom, each of which seemed to analyze itself into a different form from the others, and that is the reason why I asked the question whether any medical person had seen the expectoration going on in this particular patient

DR VICKERY I would like to ask Dr Stuart how regularly, according to her own statement, the loss of blood was Was it at just the right time?

DR STUART Everything depends on how a man reckons the right time She said that she began about the 18th to feel bad, on the 23d she began to vomit, the vomiting lasted just one week, and then it all let up until the next 18th This was the same whether the month had twenty eight or thirty one days

DR VICKERY How many months were there?

DR STUART From October to January At each period the symptoms differed She came to the hospital in October, and said that she had had the vomiting in September We took her word for that, and then the question was whether she had gastric ulcer She was told to go home and eat a good hearty meal She came back and said "Doctor, the moment I took it I vomited" We put her upon pancreatized milk Her vomiting began in June, but she raised no blood then In December she "coughed" up the blood, but did not vomit any In June she had made an apparent attempt at menstruation At one time previously she had had a discharge of blood from the anus

DR VICKERY The hæmorrhage was seen?

DR STUART Yes, she did have hæmorrhages Each time there was blood somewhere

DR BUCK Did she have a small thorax from tight lacing?

DR STUART No, she never wore corsets

DR VICKERY I don't think the slightest belief should be given to hysterical patients One once brought me some live earth-worms which she declared she had vomited That well illustrates the unreliability of this class of patients

DR STUART The chief interest seems to centre upon this, the girl was an only daughter The mother was a widow and thought everything of the girl The father died of phthisis There was phthisis everywhere in the family We asked the question, Is this phthisis? We found no signs in the lungs The question of vicarious menstruation was raised It seems to me that the whole thing from beginning to end may be phthisis A physician in Boston told me he was called to see such a case out of town He found the patient with marked signs of phthisis, cavities in both lungs The attending physician, who was a man with a large practice, said that it was vicarious menstruation, and that when puberty was established the child would get well In this case I can only suppose that she had phthisis, and we did not get the signs Dr Bowditch exam-

ined her once She was examined by several other gentlemen, all of whom pronounced her entirely free from signs Still, I believe that phthisis was there I think the whole thing was phthisis

DR FOLEY Did she have any of the symptoms of phthisis, as distinct from the physical signs?

DR STUART She was feverish all the time, she said She also had night sweats She said she did not have much cough but I do not think any reliance was to be placed on that

DR KNIGHT How long from the first blood to the appearance of physical signs?

DR STUART Seven months, from October to April

DR KNIGHT It seems to me it must have been the experience of all physicians who have seen such cases, that patients not infrequently have hæmoptysis come on sometimes for months or years before the appearance of physical signs I have frequently met such cases It is quite the rule, I should say, for patients to have hæmoptysis, and then phthisis after six months It seems to me that it is not inconsistent with the development of tuberculosis Supposing when you first examined the case you had found physical signs in the lungs The question of menstruation would not have entered your head

DR STUART Certainly not

DR KNIGHT Why the difference?

DR STUART She was so positive that it occurred so regularly They questioned her vomiting blood as she said, but certainly I saw vomitus that was streaked with blood

DR KNIGHT Do you think that gynecologists would accept the fixed date?

DR STUART No, I do not think so My view of the case was that it was phthisis That the vomiting that we had here was hysterical That the periods came so was due to the hysterical condition of the patient I don't see why a phthisical patient might not vomit every three or four weeks It is very easy for a man to be misled, I think In this case vomiting occurred every three or four weeks in the course of the phthisis In regard to the question of hysteria, it was admitted by the other physicians who saw her, that her statements were all open to doubt It does not stand on my own authority

DR BLODGETT then exhibited the following *new instruments*

A STETHOSCOPE, WITH A MEMBRANE ARRANGED IN THE BELL EXTREMITY

in such a manner as to intensify the sounds Of its efficacy he could not speak, as he had not tried it It also had the merit, the advantage of which was first pointed out by Dr Haven, of having the flexible tubes so long that the examiner may keep at a greater distance from the patient The value of this is seen especially in the case of children, and patients infested with vermin, or in persons in whom the breath is unusually offensive

THE AVITREOUS THERMOMETER

Its chief advantage is in the fact that it will not be readily broken Some of the members would criticise it on the ground of cleanliness, since it has lines of union which would be difficult to keep free from impurity

A NEW DOUBLE CATHETER

The return current is by a series of channels formed by the urethral wall on the outside, and grooves in the metal on the inside It may answer a useful purpose when it is desired to wash the surface of the urethral membrane

A SERIES OF ANTISEPTIC INSTRUMENTS WITH AN ADJUSTABLE HANDLE,

which allows the metal portions to be readily removed, and thus be subjected to cleansing processes that the ordinary handles would not permit The instruments were kindly loaned by Messrs Leach & Greene

FOREIGN CORRESPONDENCE

LETTER FROM PARIS

(FROM OUR OWN CORRESPONDENT)

Effects of the Subcutaneous Injection of the Septic Vibrion—Toxicity of non febrile Pathological Urine—Treatment of Ingrowing Nails—Nature and Origin of Leprosy—Dupuytren's Contraction and Progressive General Paralysis

At a recent meeting of the Société de Biologie Drs Charrin and Roger read a paper giving the results of their combined researches on the effects determined on dogs by the subcutaneous injection of septic vibrion This microbe, according to these authors, does not cause the dog's death, as it does on the rabbit and the guinea pig, but only a local lesion They further stated that the first inoculation generally confers immunity on the animal, and with one exception, the dogs operated on became refractory to a second inoculation M Chauveau, Professor of Experimental and Comparative Medicine at the Faculty of Lyons, asserted that these results are quite similar to those he has obtained with the microbe of gangrenous septicæmia, which is analogous to the septic microbe

In a very interesting paper by Dr V Feltz on the toxic power of non-febrile pathological urine, the author, in referring to a previous note in which he demonstrated that the toxic properties of febrile urine are far greater than those of non febrile urine, explained that this fact does not result from the density of the former He has made a series of experiments upon the noxious action of febrile urine, taken from glycosuric, albuminuric and icterous patients, and from patients who were cachectic through cancer or anæmia The urine employed was quite fresh, filtered, and analyzed He then heated it to the temperature of a dog's body and injected it into its vein The result showed that glycosuric urine of non-cachectic patients is not more toxic than normal urine Icterous urine resulting from serious renal lesion, and urine of patient's affected with cancerous cachexia or serious anæmia, are considerably more toxic than normal urine The symptoms observed during the

experiments, the kind of death which follows, the disturbances revealed at necropsy are similar to those observed when normal urine is injected in sufficient quantities to cause death From this the author concludes that it is the augmentation of the noxious principles that determines the degree of toxic action of pathological urine, and that the salts of potassium contained in urine are the principal agents in uræmic poisoning

Dr Patin, of Boulogne, has published in the *Gazette des Hôpitaux* a note on the treatment of ingrowing of the nail, and as it is a most painful affection, any remedy for its cure or relief without operation will always be welcomed by sufferers The treatment consists in first giving the patient a hot foot bath, rather prolonged, and after having thoroughly wiped and dried the part, Dr Patin introduces into the interstices of the nail, a solution of gutta percha in chloroform (10 parts of the former to 80 of the latter) which is known at the Hôpital Saint Louis under the name of "traumaticine," and employed there with success by Dr Besnier in the treatment of psoriasis These applications are made frequently for the first few days, and then at longer intervals Great relief is obtained by the anæsthetic action of the chloroform If the patient would restrict the treatment to these applications avoiding at the same time to excoriate the flesh or to injure the nail by frequent cleaning and scraping, if he has the patience to wait until the nail had sufficiently grown to enable the surgeon to cut it transversely in, taking care to blunt the angles slightly, finally, if during some time he will avoid, as much as possible, walking, and would use shoes or boots sufficiently large, complete and durable cure It is easy to comprehend the rationale of this treatment, but it is sometimes necessary in order to complete this protective dressing, to cover the diseased toe with sticking plaster, which should be renewed after each application Dr Patin asserts that he has treated several cases by this method and with perfect success

Dr E Besnier, whose name has been referred to in the preceding paragraph, is a dermatologist of some repute At a recent meeting of the Academy of Medicine, this learned physician read a note on the nature, origin and transmissibility of leprosy which he concluded by the following propositions Far from being a malady extinct, leprosy holds, on the contrary, a large place in general and international epidemiology, and it presents for this country a direct interest It is neither a spontaneous malady, nor an accidental or toxic affection, it is a malady exclusively human, specific, with a bacterian element determined It is transmissible in conditions partly unveiled, partly still obscure, man seems to be the only agent of this transmission, it is nearly certain that it can be inoculated, during vaccination for example, it is certain that man transports it from one place to another and that it remains attached to him, not to the soil, it is certain that it may be contracted by heredity, but the heredity peril is infinitely less than is still believed Extrinsic conditions, such as social misery, and sordid promiscuity, favor the propagation of the malady, the inverse conditions almost annihilate its contagious faculty In these conditions medicine can oppose to leprosy a prophylaxy which would be efficacious, based as it would be on the progress of hygiene and general sociology, without having recourse to the cruel procedures of a past age, and in remaining faithful to the principles of liberty and humanity which are the greatest glory of our epoch "

Dr Régis, of Bordeaux, read a note at the last meeting of the Association Française pour l'Avancement de Science, on the case of a patient suffering from Dupuytren's malady coexisting in progressive general paralysis, which the author summarizes as follows 1 Dupuytren's malady (retraction of the palmar aponeurosis) is really, as there is a tendency to believe, the manifestation of a general state which is nearly always that of arthritism and not a local affection of traumatic origin 2 The manifestations of gout and those of general paralysis may coexist and be confounded in the same subject, so that one is forced to conclude as to the reality of a morbid relationship already admitted to a certain extent, and which new facts will certainly confirm and more and more elucidate Another member observed that diabetes frequently accompanies the retraction of the palmar aponeurosis A B

LETTER FROM LONDON

(FROM OUR OWN CORRESPONDENT)

An Acid that Destroys Sweet Taste—Vomiting of Gall Stones—New Method of Ventilating—Hæmatometra with Degenerating Fibro Myoma—Diseases of the Bible—Indian Hemp in Persistent Headache

A new acid has been extracted, from the leaves of the plant known to botanists as gymnema sylvestra, by Dr D Hooper It is a plant of the family of asclepiadiæ, which grows in India A few drops of the acid well diluted are found to cause all sense of the sweet taste of sugar to disappear as if by magic For instance, if gingerbread were eaten, only the taste of the ginger was perceived, if a sweet orange, only the acid flavor of the citric acid But what is still more curious, not only the sweet taste of substances containing sugar is effaced, but bitterness is also destroyed at the same time Hence, if a person takes sulphate of quinine after a few drops of the acid, it merely tastes like so much chalk or plaster of Paris The effect in question lasts, as a rule, for one or two hours, and then the sense of taste returns to its normal condition The active principle of the leaves of this plant appears to be soluble in water, alcohol, ether and benzol The aqueous solution of the substances soluble in alcohol has a decided acid reaction, and the author extracted an acid from it not unlike chrysophanic acid in some respects To this new product has been given the name of gymnemic acid, and its anti sweet and anti bitter properties are considered by Dr Hooper to point to its becoming a valuable addition in prescribing, and in a short time he intends to publish a paper upon its various actions and uses

An interesting case of vomiting of gall stones has just occurred under the care of Dr F M Pope.

When first seen the patient, a stout woman with fresh complexion, had marked tenderness and a sense of resistance in the right hypochondrium, hepatic dulness was not increased, and there was no humor The urine contained no sugar or albumen, she had had vomiting at frequent intervals for about five weeks Two days later she had a considerable increase of pain, accompanied with internal strabismus and slight convulsions, however, she was not unconscious During the day she vomited two gall stones of about five eighths of an inch in diameter, with six or eight facets on each, and several smaller ones For the next two days she both vomited and passed several gall stones, but eventually died, collapsed through combined vomiting and diarrhœa, twenty four days after Dr Pope first seeing her At the post-mortem examination nothing abnormal was seen in the abdomen, no general peritonitis, no excess of peritoneal fluid, but on raising the liver the gall bladder was found to be situated in a circumscribed abscess cavity, formed by the adhesion of the neighboring organs The gall bladder itself was in a sloughy condition, and several ragged openings existed at its fundus, some small stones had escaped into the cavity There was a circular opening half an inch in diameter, with well defined edges, leading from the gall-bladder into the duodenum, at about three quarters of an inch below the pylorus The cystic and common ducts were patent, and one or two small stones were found in the duodenum The stomach was healthy, and there was no ulceration from the gall-bladder into it The rest of the abdominal organs were healthy The total number of stones vomited weighed 170 grains, those passed per rectum 103 grains The case is considered by Dr Pope to be excessively interesting, as showing that a gall stone may enter the duodenum and then pass backwards into the stomach

A new system for ventilation which is coming rapidly into vogue is the D C Green system The principle of the invention is the bringing of a small stream of compressed air to bear at any point of a large tube by means of an automatic nozzle, the compressed air forcing out the nozzle, according to the degree of pressure, and thus liberating itself in an annular current at the base of the cone This current is about 3 per cent of the air contained in the tube or chamber in which it escapes, but it induces a strong current of the remaining 97 per cent fed from the external atmosphere, so that a strong breeze is made to pass through the tube within which the nozzle is fixed Exhausting nozzles are used as well as injecting ones, so that while fresh air is supplied foul air can be removed As no fans or large pipes are required, the system seems especially applicable to vessels and mines, because the compressed air can be taken any distance and set free where ever the nozzle is placed

Mr W A Meredith at the recent meeting of the London Obstetrical Society, reported an interesting case of hæmatometra associated with a degenerating fibro-myoma, which he had treated by supra-vaginal hysterectomy The patient, aged 46, had for some years been subject to a large abdominal tumor, and severe menorrhagia In 1883 she was seized with pleurisy and confined to bed for eight weeks, since when menstruation had ceased She had continual abdominal tenderness and spasmodic pains in the tumor until the latter part of last year, when she entered the Samaritan Hospital The abdomen was then occupied by an enormous semi solid growth The vaginal portion of the cervix uteri was soft, but unenlarged, and its canal occluded The tumor consisted of an enormously distended uterus with a degenerating fibroid in its anterior wall, in which was a cavity communicating by a large oval aperture with the uterine cavity, both were filled with altered blood The entire mass weighed 15lbs, and probably contained originally at least 5lbs of blood Mr Meredith considered that sudden occlusion of the cervical canal, probably due to inflammatory action, caused the sudden and persistent retention, rendered permanent by partial rotation of the elongated uterine cervix during the patient's confinement in bed in 1883

Sir Risdon Bennett, M D, has published a small work entitled, "The Diseases of the Bible" In the briefly interesting and instructive little book Sir Risdon naturally travels over some rather dangerous, or at least contentious ground In the introduction the author at once directs attention to the fact that the Bible, although dealing largely with methods and suggestions for the prevention of disease, really says very little indeed respecting remedial treatment, when once any ailment has distinctly manifested itself To the precautions inculcated of old for the benefit of the Israelite we are even now indebted, according to Sir Risdon Bennett On this head he says "Sanitary laws are laid down in the most specific and detailed form, and the Mosaic sanitary code may be said to constitute the basis of modern sanitary legislation Rules relating to food, clothing, personal cleanliness, intercourse with the sick and contact with the dead, and various matters connected with social life, are given in minute detail, the value and import of which, for the most part, it is easy to see"

Dr Stephen Mackenzie says that in doses of one half grain Indian hemp, night and morning, and continued for some time, is the most valuable remedy he has met with in the treatment of persistent headache

G O M

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK

(FROM OUR OWN CORRESPONDENT)

The Sphygmograph—Chronic Progressive Caries of the Bones of the Foot—Analgesic Value of Recent Antipyretics—Dressing for "Green-stick" Fractures of the Clavicle

The fifth special meeting of the Fifth District Branch of the New York State Medical Association was held at the Pavilion Hotel, New Brighton, Staten Island, on the 15th of November, and was one of the most successful of the series that have been held from time to time during the past three years The

papers presented were excellent, and the discussions of the various subjects brought forward in them of more than ordinary interest, while from a social point of view the occasion was a most attractive one It is the aim of these meetings to bring together in pleasant intercourse members of the profession from different parts of the District, and all the arrangements for the one in question were of the most satisfactory character, a result due to the exertions of the committee having the matter in hand, which consisted of Drs F U Johnson, Alfred L Carroll, and W C Walser, of Staten Island

The scientific proceedings were opened by Dr Carroll, who in his lucid and finished style made a forcible plea for the more general employment of the sphygmograph, pointing out the causes why the results hitherto obtained with it were often so unsatisfactory His remarks, which were on the clinical significance of sphygmographic tracings, were illustrated by a large number of examples, and among them were two from patients suffering with exophthalmic goitre, the tracings from which, so far as he was aware, had never before been taken

While the sphygmograph, he said, could never supersede the trained ear of the auscultator in cardiac disorders, it might guide his examinations, and perhaps modify his prognosis, and, in addition, in some instances, it might serve to localize an internal aneurism with a precision unattainable by any other means It was well known that the intensity of a murmur at one of the valvular orifices was not invariably proportionate to the gravity of the lesion which induced it, and, except where the attending circumstances of aggravated cases aided our judgment, we were often uncertain as to the exact condition present Here the sphygmograph might come to our relief with a mechanical measurement more accurate than our unassisted senses Variations of muscular tension inappreciable by the most delicate and practiced touch, degrees of obstruction or regurgitation otherwise unascertainable, were graphically recorded

Too much, however, ought not to be expected from the sphygmograph Its tracings in a given form of disease were not identical and diacritic, they were only generically similar It was not to be considered as a means of diagnosis but, like other so called "instruments of precision," as a frequently useful aid to diagnosis Some years ago, in a paper published in the *New York Medical Journal*, he had endeavored to point out the extent and limitations of its utility, his present purpose was chiefly to call attention to a hitherto unnoticed source of misconception in regard to its registrations

One of the principal drawbacks to the general recognition of the value of the sphygmograph was the very ingenuity expended in its improvement, which had resulted in the invention and adoption of several different patterns of mechanism, each of which gave a tracing differing somewhat from those of the others with the same pulse Hence, since the significance of every part of the hieroglyph depended on its conformity with or departure from a known normal standard, it was necessary for the more recondite indications of any sphygmogram to be told by what instrument it had been taken, and without this information, and knowledge of the normal performance of the particular pattern of instrument employed, it was impossible to compare the results of different observations and to profit by published records Having referred to the differences in the different varieties of sphygmographs, some of which he exhibited, Dr Carroll stated that the rate of speed at which the slip was made to move would also materially modify the sphygmogram

In view of these facts, and to establish sphygmography in the professional estimation which it merited, he said, in conclusion, that it was desirable—since it was not likely that any standard would be universally adopted—that all who published records of their work should not only mention the instrument which they employed, but give in addition, for comparison, its tracing of a normal pulse

Dr Walser, of Port Richmond, read a paper on "Chronic Progressive Caries of the Bones of the Foot, with Cases and Presentation of a Patient" The two cases referred to were of extreme interest and rarity In one of them, a female, the trouble had commenced at the age of 10 months, and in the other, the patient presented, who was a male, at the age of 22 years In both instances the origin of the trouble was very obscure, there being no syphilitic or other diathetic history The disease was comparatively painless, in the case of the woman, in which it did not extend beyond the feet, completely so In the man who was presented it also involved the tibia, and the only pain that he complained of was referred to that region

Dr S H Benton, of Brooklyn, made a valuable contribution to the subject of the analgesic efficiency of the recent antipyretics He said that his attention was first drawn to the anodyne properties of antipyrin in November, 1886, when he found that this agent, given in a temporary febrile condition, relieved headache in a case of two years' standing, in which a very large number of remedies had been tried in vain After three months of treatment by antipyrin, given when indicated for pain, the headache, which was located in the right mastoid region, permanently disappeared Soon afterwards Dr Benton tried antipyrin with excellent results in the case of his own wife She was suffering from an attack of hemicrania, accompanied with a severe brachial neuralgia, with which she had frequently been troubled during the past three or four years Since then Dr Benton had several times repeated the antipyrin in similar attacks, and always successfully While he could not say that she had been permanently relieved, it was a fact that the interval between the attacks had become much longer than formerly, and she had not complained of the pain in the brachial plexus for two months

Having related a case of locomotor ataxia in which antipyrin gave much relief, he said that he was not sure that one would be justified in continuing the administration of such agents for an indefinite period, as would doubtless be necessary in the pains of locomotor ataxia It was said, he continued, that the action of antifebrin and its analogues has a destruc-

of performing Alexander's operation, and an operation for shortening the sacro-uterine ligaments Not all will agree with the recommendation to treat pelvic abscess through the rectum, nor to separate adhesions of the retroverted uterus through an incision in the cul-de-sac, yet in this age of innovation and rapid advance in surgery, new procedures must not be too hastily condemned

To the many members of the medical profession throughout the country who are well acquainted with the ability, the knowledge and energy of Byford the younger, it will be a genuine pleasure to see his name on the title page as co-editor of the present edition

The book, in brief, is a text book for the student, a guide to the practitioner, a counselor to the specialist, and an honor to the gynecological literature of America

A THEORETICAL AND PRACTICAL TREATISE ON ASTIGMATISM By SWAN M BURNETT, M D, Professor of Ophthalmology and Otology in the University of Georgetown, Ophthalmic and Aural Surgeon to the Garfield Hospital, and Director of the Ophthalmic and Aural Clinic at the Central Dispensary and Emergency Hospital, Washington, D C With 59 diagrams and illustrations 8vo, pp 245. St Louis J H Chambers & Co 1887

This work is the only one of its kind It is devoted entirely to the study of the nature and correction of astigmatism The subject is an important one not only to specialists but also to the general practitioner The relation between so called nervous diseases and errors of refraction has become generally recognized Reflex annoyances dependent upon ametropia are daily observed, and the attention of physicians cannot be too forcibly drawn to the important role played by optical defects in the causation of these neuroses The author has defined the fundamental principles necessary for a proper understanding of astigmatism, in a clear and concise manner, all the facts are treated in a popular style, enabling the student to grasp readily a subject usually considered difficult In the chapter on the use of atropine for the detection of errors of refraction, the doctor emphasizes an opinion that latent hypermetropia of a low degree should not be considered abnormal, for, he says, "The result of an examination of the refraction of a large number of children ranging in age from a few hours to 10 and 12 years, seems to point to the fact that in the human eye we have from infancy to adult life a gradual evolution from the hypermetropic to the emmetropic and myopic condition" In many cases all of the hypermetropia is overcome by the natural tonicity of the ciliary muscle, which can not be regarded as pathological and interpreted as a muscular spasm All methods of examination are reviewed A special chapter is devoted to the investigation of the "shadow test," known as keratoscopy and retinoscopy, for which however the name of skiascopy (shadow test) as suggested by M Egger, is substituted An appendix containing a statistical record of 806 astigmatic eyes will undoubtedly be of great value to scientific investigators in search of reliable material

TREATISE ON DISEASES OF THE SKIN By T MCCALL ANDERSON, M D, Professor of Clinical Medicine in the University of Glasgow With colored plates and numerous wood engravings Octavo 650 pages Cloth, $4 50, Leather, $5 50 Philadelphia P Blakiston, Son & Co 1887

This is the most recently published work on the subject and is worthy of a place among the other numerous text books on dermatology The wide experience and eminent character of the author will command attention His American publisher has made a handsome volume which it will illustrate with about seventy cuts The scope of the work is the same as that of others on the subject Particular attention is given to the discussion of diagnosis and treatment It is a noteworthy fact that Dr Anderson is not a specialist but a general practitioner He has had, however, unusual opportunity for the study of diseases of the skin 11,000 consecutive cases of various skin diseases are analyzed by the author Considerable space is devoted to diseases of the hairs Among other things we notice that in the healing of deep ulcers the author does not recommend sponge grafting which has been introduced by his fellow countryman Dr Hamilton, but thinks that such grafts often rather delay and retard healing

MISCELLANEOUS.

THE NORTH CENTRAL ILLINOIS MEDICAL ASSOCIATION, will hold its fourteenth annual meeting in the City Hall, at Streator, Tuesday, December 6, 1887, beginning at 10 30 A M

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM NOVEMBER 19 1887, TO NOVEMBER 25 1887

Col Glover Perin, Asst Surgeon General, retired from active service November 17 1887, by operation of law S O 268, A G O, November 17, 1887

Col A K Smith, Surgeon, assigned to duty as attending surgeon in New York City

Lt Col J R Smith, Surgeon, ordered for duty as Medical Director, Dept of Dakota

Major S M Horton, Surgeon, granted six months' leave of absence, on surgeon's certificate of disability

Capt W H Arthur, Asst Surgeon, granted two months' leave of absence, with permission to apply for two months' extension, to take effect on the arrival at Ft Niagara, N Y, of Asst Surgeon Paul R Brown

First Lieut J R Kean, Asst Surgeon, granted two months' leave of absence to take effect about December 1 S O 269, A G O, November 18, 1887

Capt Paul R Brown, Asst Surgeon, ordered to Ft Niagara, N Y

Capt John O Skinner, Asst Surgeon, ordered to Ft Ontario, N Y

Capt Chas Richard, Asst Surgeon, ordered to post near Denver, Col

Capt E C Carter, Asst Surgeon, ordered to Willet's Point, N Y S O 270, A G O, November 19 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY DURING THE WEEK ENDING NOVEMBER 26, 1887

P A Surgeon F S Nash, detached from duty at the Smithsonian Institute, and ordered to the Washington Navy Yard.

THE

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EDITED FOR THE ASSOCIATION BY N S DAVIS

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ADDRESSES.

ADDRESS TO THE MEMBERS OF THE REGULAR MEDICAL PROFESSION OF LOUISIANA

BY JOSEPH JONES, M D,

PRESIDENT OF THE LOUISIANA STATE MEDICAL SOCIETY

GENTLEMEN —The tenth annual session of the Louisiana State Medical Society will be held in the town of Monroe on the third Wednesday in April, 1888, and subjects of paramount importance to the Medical Profession will be presented for consideration and discussion We briefly formulate some of the questions now at issue, with the hope that they may receive the earnest consideration of the medical profession

I —THE ESTABLISHMENT OF A STATE MEDICAL LIBRARY,

for the preservation of the archives of the Society, the diffusion of medical knowledge, and the promotion of original scientific research in all the departments of medical science

The object sought to be accomplished is the collection, classification and preservation of the manuscripts, documents and publications bearing upon the eventful history of the medical profession of the Mississippi Valley from the first settlement of Louisiana in 1699 to the present day

Every fact, document or publication that relates to the history of epidemics, and to the origin, cause and prevention of endemic and epidemic diseases in Louisiana and in the Mississippi Valley, should be carefully preserved in permanent form, and in a permanent building, and this building should also serve the purpose of a Central Hall, for the meetings of the State Medical Society at stated periods It is believed that facts of great value, and rare documents and works, are scattered over this land, which if gathered together and sheltered within the ample folds of a permanent building, would prove of inestimable value

It is the earnest hope of the patriot and friend of progress that each member of the Louisiana State Medical Society and of the entire medical profession of the South and Southwest, will view with favor this important enterprise, and contribute documents, works, original researches, and practical observations for permanent preservation in the medical archives

We cannot build and maintain a library without money Without the generous response of the medical profession this useful and benevolent project will remain unaccomplished

Dr J S Johnston, of Alexandria, by his generous gift, during the meeting of the Louisiana State Medical Society on the 12th of April, 1887, of a square of ground for the building of the library, has set a noble example to the medical profession

II —MEDICAL EDUCATION

When we consider the importance and elevated character of the science of medicine—its object, the preservation of the health and lives, and the healing of the diseases, and the amelioration of the physical and mental sufferings of our fellow human beings—its extent embracing a knowledge of all science—it is evident that medical education should engage the earnest attention of the entire medical profession The advances made in all the branches of knowledge, and especially in the science of medicine, during the past century, have exceeded in extent and value those of all past ages, and it is no longer possible to compress its vast domain within the narrow limits of *seven Professorships*, or to compress its circle within the brief span of less than thirty months

The present age owes its wonderful progress to *experimental scientific research*

The value and perfection of modern educational systems are due, to a large extent, to practical demonstrations in the great field of physics, chemistry, physiology, pathology, therapeutics, and clinical medicine

Universities of learning and science must be regarded as composed of two distinct bodies On the one hand must be ranged the organizing powers and executive officers—the *Trustees* and *Professors*, and on the other, the greater and more useful body, the grand army of the *Alumni* The voice of the latter should not be silent, but should speak in thunder tones, demanding a firm, wise and steady enlargement and practical advance of the colleges and universities all along the lines of literature, art, and science

III —PUBLIC AND INTERNATIONAL HYGIENE

The medical profession of Louisiana should be foremost in the great work of perfecting and unifying the health and quarantine laws of the individual States and Territories of this great Republic The confusion, alarm and terror of the inhabitants of entire communities and States, following local outbreaks of yellow fever on the Atlantic and Gulf

Coasts, and the threatened importation of cholera from Europe, reveal an imperfection of sanitary laws and knowledge, and of defencelessness against invasions of foreign pestilence This condition of the disorganized sanitary forces of the United States, can only be fitly compared with her dismantled fortresses and rotten navy

It is high time that the medical profession and the civil authorities of the individual States and Territories should be aroused to the necessity and importance of united action for the discussion, perfection and inauguration of comprehensive measures for the exclusion of foreign, and the eradication of domestic, pestilence This unification and perfection of the sanitary and quarantine laws of this Nation can be effected, not by the combined wisdom and action of the legal representatives of the sovereign States, acting in concert and assembled in general convention Let the accomplished, learned and patriotic physicians of Louisiana take the lead in this work, which has for its aim the preservation of the lives of the people, and the advancement of the material social and moral welfare of our country

IV —PUBLIC SCHOOLS, THEIR HYGIENE, AND THE INTRODUCTION OF THE STUDY OF CHEMISTRY

The first duty of the managers and officials of the public schools of Louisiana, should be to perfect their hygienic arrangements, which in many localities are proven to be defective and detrimental to the health of the teachers and pupils The science of chemistry has contributed more to the physical and industrial progress and wealth of the human race than all other branches of human knowledge Chemistry is the basis of hygiene and physiology, and it has furnished facts of inestimable value to the agriculturist, to the mining engineer, and to the manufacturing chemist

The introduction of the study of inorganic and organic chemistry into the public schools of Louisiana, will not only aid in the intellectual training of the children, but will aid materially in the agricultural and mineral progress and development of the State

V—The Hygiene, Diseases and Treatment of Prisoners in the penitentiary, prisons and jails of Louisiana

VI—The establishment of a School for the Education and Training of Nurses, and the consideration of the means by which the nurses employed in the Charity Hospitals of New Orleans and of other cities may receive regular and just compensation for their services

VII—The revision, amendment, perfection, and re enactment of the acts of the General Assembly of Louisiana relative to the Practice of Medicine in Louisiana

In this connection, the protection of the public against unqualified and unprincipled practitioners of medicine and pharmacy, and against the irresponsible and indiscreet sale of alcoholic liquors, drugs and poisons by druggists, should receive careful consideration, with a view of influencing legislative action

VIII —ORGANIZATION

Of the 992 registered physicians in the State of Louisiana, up to January 1, 1887, 773 are classed as regular, and of this number only 176 are members of Louisiana State Medical Association Of the fifty nine Parishes of Louisiana thirty-four, or a little over one half, have representatives in the State Medical Society

These figures furnish an argument for renewed activity on the part of the members of the parent organization, to secure the organization of Parish Medical Societies The members of the medical profession throughout the State are most earnestly and respectfully urged to organize societies and send delegates to the meeting in Monroe

IX —ORIGINAL CONTRIBUTIONS TO MEDICAL SCIENCE

The value of the transactions of medical societies depends primarily and almost exclusively upon the contributions of their members to the various branches of medical science It is earnestly hoped that the Transactions of 1888 will be enriched by the carefully recorded experience of the physicians of Louisiana, relating to general medicine, general surgery, obstetrics, gynecology, therapeutics, materia medica, anatomy, physiology, pathology, diseases of children, ophthalmology, dermatology, hygiene, climatology, diseases of the nervous system, dental and oral surgery

No State offers a richer or wider field for the careful and comprehensive study of disease, its chief city, situated at the mouth of the most important river in the world, offers, in its Charity Hospital, a vast field for clinical study in all the branches of medicine and surgery, its Delta has furnished, and still furnishes, the most important area for the study of the relations of climate and soil to the development and propagation of all the various forms of malarial disease Here yellow fever has committed its greatest ravages, and here it has received the careful study of learned and humane physicians Every fact relating to the history, origin, propagation and treatment of yellow fever and Asiatic cholera, typhus and typhoid fevers, malarial hæmorrhage, Oriental leprosy, hydrophobia, scarlet fever, diphtheria, and other endemic infectious and epidemic diseases, in the different parishes, cities, towns and villages of this State, should be recorded by the practicing physicians, and presented in the form of cases, essays, and monographs, for publication and permanent preservation in the archives of the State Society.

COMMITTEE ON ESSAYS

The committee on essays as now constituted consists of the following members Dr I J Newton, Bastrop, Chairman, Drs R H Day, Baton Rouge, J W Dupree, Baton Rouge, H D Bruns, New Orleans, C D Owens, Alexandria, W D White, Abbeville, Smith Gordon, Alexandria, W L Dickson, New Orleans, R W Seay, Pilcher's Point, Thomas Hebert, New Iberia

The physicians of Louisiana are respectfully requested to forward the titles of their essays, monographs, papers, and cases, at the earliest practicable

moment, to the accomplished and energetic chairman, or to any one of the eminent medical men composing the committee on essays

In the past much good has been accomplished by the labors of the chairman of this committee, and its members have demonstrated their devotion to the best interests of our profession by their valuable contributions to its literature

[136 Washington Avenue, 4th District, New Orleans, La., November, 1887

ORIGINAL ARTICLES.

THE CAUSE AND TREATMENT OF INFANTILE ECZEMA

Read in the Section on Diseases of Women and Children, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY JOHN V SHOEMAKER, A M, M D,
OF PHILADELPHIA PA

Infantile eczema is one of the most common diseases of early life It is always a distressing and frequently an obstinate affection, remaining for weeks or months, but as a rule, it is much more amenable to treatment than the eczema of adults It may occur at a period during infancy, but it is most frequently observed during the first six months of infantile life, at the time of weaning, and during the process of dentition

It may appear in a variety of forms In some cases it is characterized by the development of a variable number of erythematous spots, or blotches upon the face, scalp, and other portions of the body In others the eruption is purely papular, in still others it consists solely of vesicles situated upon a reddened inflamed base, or both lesions may be intermingled The pustular variety is characterized by the formation of pustules of various sizes, either alone or commingled with vesicles, papules and vesico papules The disease may involve any or all portions of the integument, but it most frequently attacks the face, scalp, neck, chest, buttocks, and the upper and lower extremities It pursues a variable course The papular and erythematous forms usually disappear by resolution, but they may pass imperceptibly into the chronic squamous stage of the disease The surface then presents a dull red infiltrated appearance, and is covered with a number of minute epidermic scales

The vesicular and pustular varieties rarely terminate in resolution As a rule, the vesicles and pustules burst within a few days after their development, exposing a raw weeping, bleeding surface, from which a sero purulent fluid exudes, and dries into large firm yellowish crusts When the scalp is the seat of the eruption, the hairs are matted together by the exudation, and the entire scalp becomes covered with yellowish masses, forming the condition known as crustalactea As the disease progresses the irritation increases, so that the inclination to scratch the parts become almost irresistible, and patients tear the surface with their fingernails even while asleep This, of course, increases the exudation and enlarges the diseased area After an interval of several weeks the morbid action may cease, spontaneous repair take place, and the crusts drop off, disclosing a healthy but somewhat reddened surface Usually, however, unless appropriate treatment be instituted the disease passes into the chronic stage, and remains for months or years with occasional periods of amelioration and exacerbation

Infantile eczema is due practically to one of four causes 1 Insufficient or improper food 2 Imperfect assimilation 3 Deficient excretion 4 External irritation

Insufficient or Improper Food—This is one of the most frequent exciting causes of the disease If the mother's milk is scanty in quantity, or poor in quality, or altered in character by pregnancy, passion, menstruation, anxiety or disease, the nutrition of the child will suffer, and eczematous or other eruptions speedily appear If the child is handfed, and given unsuitable and indigestible articles of food, or, if the cow's milk upon which it is nourished is so diluted with water as to be deprived of its value the same result will follow

Imperfect Assimilation—This is another potent factor in the production of the disease The food may be perfect in all respects, but if owing to disturbances of the digestive tract a considerable portion of it is either rejected by vomiting, or hurried out through the intestinal canal before digestion, and assimilation are complete, the blood will become thin, the nervous system will suffer, and various cutaneous eruptions appear

Deficient Excretion—Deficient excretion is not as frequently chargeable with the development of infantile eczema, as it is with many other cutaneous disorders, but many stubborn cases spontaneously disappear when the normal functions of the various excretory organs are reestablished

External Irritation—This is frequently the unsuspected cause of numerous cases of infantile eczema Among the common sources of irritation may be mentioned, woollen or flannel clothing, light clothing, dyed clothing, wet diapers, scratching, and the too frequent washing of the body and scalp with soap and water The eruption is often aggravated by the use of quack preparations, or ointments recommended by obliging friends and neighbors

Treatment—The general principles upon which the successful treatment of infantile eczema must be based, are, to improve the nutrition of the patient, correct any disorder of digestion or excretion that may exist, and protect the affected surface from further irritation and endeavor to restore it to its normal condition The measures to be employed in each case will vary with the cause of the disease, and the extent, variety and stage of the eruption In some cases attention to diet and hygiene will be sufficient to effect a cure In other cases local or constitutional medication will be required, while in obstinate cases both local and constitutional remedies must be employed In mild cases of the erythematous or papular variety, in which the deficient character of the food supply is plainly appar-

ent, immediate improvement can often be obtained by simply giving a sufficient quantity of appropriate nourishment There are several ways of accomplishing this If the mother is nursing the child, and her milk is scanty or impoverished, she should be placed upon tonics and a liberal diet, and directed to give the child a definite quantity of cow's milk in addition to her own at stated intervals throughout the day I have notes of several cases in which a rapid and decided improvement in the character and amount of the mother's milk, and a disappearance of the eruption from her child followed a liberal diet, conjoined with the use of the formulæ

℞ Tinct ignatiæ gtt x
Tinct serpentariæ ℥ vj
Tinct cinchonæ ℥ j
℔ Sig Teaspoonful in water before meals and at bedtime

If, unfortunately, the infant cannot be nursed by its mother, the best substitute for its natural food is pure undiluted cow's milk, unmixed with any other substance whatever More than thirty years ago Dr N S Davis declared before this Association, that the practice of diluting the cow's milk given to infants was the direct cause of incalculable suffering and innumerable deaths Careful observation has convinced me of the truth of Dr Davis' assertion Time and again have I been called in to see infants of from ten weeks to six months old who were crying continually, pining away, and in addition were covered with various forms of eczematous eruptions On inquiring what the little patients were fed upon, answers were one part milk and three parts water, one part milk, one part flour, and five or six parts water In one case the unfortunate child was being slowly and unknowingly starved to death upon one part milk and eight parts water My orders in every case were to at once give each child plenty of pure undiluted cow's milk and nothing else for food For some I directed 2 grains of pepsin to be given in addition with each feeding No other medication was employed or required, and in every case the eruption spontaneously disappeared in from a few days to two weeks

In other cases it will be found that the trouble is due to the child being given potatoes, pies, pastry, pork and all sorts of table-food, preparatory to being weaned, or to assist it to cut its teeth The child's stomach is unable to digest such food, its gastro-intestinal canal is disordered, and various eruptions appear that are charged to dentition Dentition is a perfectly natural process, and in the overwhelming majority of cases is accomplished without any reflex or direct disturbance of the system The cases of eczema attributed to it are numerous, but they are really due to errors of feeding and disorders of digestion

Cases of infantile eczema, due to imperfect digestion and mal-assimilation, require to be studied carefully Those in which there is a deficiency in the gastric juice, are benefited by the administration with each feeding of from ½ to 2 grains of pure pepsin, or from 2 to 5 grains of lactopeptine Nux vomica in doses of from one quarter to two minims of the tincture three times a day is also valuable Minute doses of the chloride of iron, or of hydrochloric acid, sometimes yield better results than either pepsin or nux vomica If diarrhœa exist, small doses of opium or Dover's powders, with an astringent tonic, like cinchona or geranium, will be of the utmost value In some cases a change of air, as to the seashore or the mountains, will be the most effective remedy Cod-liver oil will be found of especial value in all patient's that are debilitated, anæmic, or that present any evidences of the scrofulous diathesis It may be given in half drachm doses three times a day, or used as an inunction every morning In many cases, no other treatment will be necessary The syrup of the iodide of iron is also valuable The dose will vary from five to twenty drops, according to the age of the patient It may be given in any convenient medium or in combination with cod liver oil

Quinine is also an effective remedy, especially in malarious districts and in cases in which the eruption manifests itself during the spring and autumn months It may be given in the syrup of yerba santa, in doses of from ½ grain to 3 grains once or twice a day Very often in cases arising from gastro-intestinal irritation or complicated by constipation, marked and rapid improvement can be obtained from the use of minute doses of calomel, alone or combined with a small quantity of jalap resin

℞ Hydrarg chlor mitis gr j
Resinæ jalapæ grs j
Sacchari albæ grs x
℔ Make 6 powders
Sig One powder every other day

Podophyllin and leptandrin will also be found serviceable Castor-oil is a time-honored and an effective remedy Small doses of syrup of rhubarb or carbonate of magnesia are frequently beneficial In acute cases accompanied by fever and an increase of the circulation, aconite is potent for good It will be noticed that I have said nothing as to the use of arsenic in the treatment of the various forms of infantile eczema The omission was intentional Arsenic is sometimes requisite in the treatment of obstinate forms of eczema in adults, but in the eczema of childhood it is not only unnecessary, but frequently injurious For many years I have not employed arsenic in cases of infantile eczema which have come under my observation I would advise that arsenic be avoided in the treatment of infantile eczema, as its use is often productive of more injury than any benefit it may produce on the disease

Local Treatment—In cases in which the itching is a marked symptom, various soothing and anti pruritic lotions and ointments may be employed Those which I most frequently order are

℞ Acidi carbolici grs ij
Hydrarg chlor mitis gr x
Ung tinci oxide benz ℥j
℔ Ft ungt

℞ Creasoti m iij
Aquæ ℥iij
℔ Ft loto

℞ Chloral hydrat gr v
Aquæ menth pip ℥ij
℔ Ft loto

Applications of cold water, ice water, lead water and laudanum, or a saturated solution of bicarbonate of soda, will also be found grateful and calmative

When the eruption has become subacute or chronic, and the integument is covered with crusts, it would be folly to expect any improvement until the diseased surface is exposed to view The affected region should be covered with a starch poultice, or saturated with oil to loosen the crusts and scales, which must be carefully picked off Various stimulating ointments may then be applied to the exposed, denuded surface, but care must be taken to avoid increasing the irritation and inflammation The medicaments employed should be such as will constringe the capillaries and reduce the congestion, while they at the same time form a protective covering for the raw and oozing corium The subnitrate and the oleate of bismuth and the oleate of zinc, either in powder or ointment form, are excellent applications for this purpose The ordinary benzoated oxide of zinc ointment alone, with 5 grains of camphor to the ounce, is also serviceable The following ointment will be found valuable

℞	Pulv opii	gr iij
	Acidi tannici	ʒss
	Plumbi carbonatis	ʒj
	Olei anthemidis	gtt v
	Adipis	ʒj

Another excellent procedure is to brush a 25 per cent solution of the fluid extract of geranium over the surface after the scales have been removed Diachylon ointment, weak tar ointment, cucumber ointment, weak salicylic acid ointment, and the ointment of the carbonate of lead, may also be employed with benefit Harsh and irritating applications must be sedulously avoided, as they are certain to protract the disease Cases due to external irritation usually require nothing more than the removal of the irritant and the application of a soothing ointment or lotion to the part affected Tight, dyed, woolen or flannel clothing should be replaced by articles of wear composed of some less offending material If wet diapers are at fault they should be removed as soon as soiled, the parts gently mopped dry with a soft cloth, and then dusted with zinc oxide, bismuth subnitrate, or lead carbonate, or painted with a dilute solution of geranium maculatum If the eruption is due to the scratching and irritation consequent upon the presence of lice, the hair should be cut short, and any of the following ointments rubbed well into the scalp

℞	Hydrarg chlor mitis	gr x
	Acidi carbolici	gr ij
	Ungt zinci oxidi	ʒj
℞	Naphthithol	gr x
	Ung zinci oxidi	ʒj
℞	Sulphuris sublimati	ʒij
	Pulv marantæ	ʒij
	Ungt aquæ rosæ	ʒj

Cases that are the result of the too free use of soap and water will usually spontaneously subside upon the suspension of the practice An infant's body should be bathed every day in tepid or warm water, but soap should not be applied to its delicate skin more than two or three times a week

TWO CASES OF TUMOR OF THE OPTIC NERVE

Read in the Section on Ophthalmology and Otology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY GEO E FROTHINGHAM, M D,

PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN THE UNIVERSITY OF MICHIGAN

Forty-three cases of tumor of the optic nerve have been reported, of which a large proportion have been sarcomata Fibromata stand next in order of frequency Scirrhous carcinoma and genuine neuroma have also been reported [1] I have met two cases in my own practice, both of which were sarcomata The following is a brief report of these cases [The tumors were presented for examination]

Case 1 —C A H, a lad æt 7 years, residing in East Saginaw, Mich, was brought to me for consultation May 18, 1882 The father gave the following history About a month previous he noticed that the right eye seemed larger, and that it was totally blind It had not changed in appearance since the deformity was first noticed He consulted an oculist, who was in doubt as to the condition The boy had experienced but very little pain in the affected eye, and was free from headache

I found the right eye totally blind and affected with slight exophthalmus Tension normal Left eye appeared normal, V = $\frac{20}{20}$, Hm = o 75 D Ophthalmoscopic examination showed the disc of right eye elevated and outline indistinct The elevation of the disc was estimated as equal to about 1¾ mm The lymphatic glands of the neck were enlarged, and the patient had the appearance of being affected with scrofula No tumor could be felt on passing the finger into the orbit as far as practicable The walls of the orbit seemed smooth, the eyeball being displaced about 3 mm directly forward, its movements being unrestricted From appearances I thought a tumor existed surrounding the optic nerve, but of what character could not be determined The exophthalmus might be due to other changes deep in the orbit If a tumor existed, the question arose as to whether it was malignant The question also arose as to whether the enlarged lymphatics were due to scrofula, or were they evidence of malignant disease? I prescribed iodide of potassium and citrate of iron and ammonia, and requested that the patient be brought to me again in two weeks

June 13, patient returned, feeling much better, appetite improved, and the enlargement of the lymphatics was much less The outline of the right optic disc is less obscured, but the elevation of the papilla seemed about the same I directed a continuation of the iodide and iron and added cod liver oil and a bitter tonic to the medication September 16, patient returned Has discontinued medication since July 10 The optic papilla seemed more elevated, but the exophthalmus remained about the same I advised a return to the previous medication, but after a few weeks, to substitute the syrup of iodide of iron in suitable doses for the iodide of potassium and citrate of iron and ammonium

[1] Vossius Archives of Ophthal, vol xii p 294 also vol xv p 133

From this time to January 13, 1883, the eye remained about the same It then began to project a little more The same general plan of treatment was continued, as no operative procedure seemed to be called for The tumor continued to grow from this time rapidly, and on July 21, an examination detected a smooth, somewhat yielding tumor on pressing the finger into the orbit beside the eyeball It seemed to be in the pyramidal space, inclosed by the recti muscles, but its exact nature could not be determined Another examination was requested at an early date This was, however, delayed until September 1, when the patient was brought to me just as I was about to depart on a journey The tumor had grown even more rapidly than before, and the exophthalmus was extreme The general health was good, and the enlargement of the glands in the neck had about disappeared I advised immediate operation, but it was decided to defer it until my return, which was expected in two weeks This was unavoidably delayed, and it was not until September 27 that the operation was performed

The patient being etherized, an incision was made through the conjunctiva and fascia, and the tendon of the internal rectus divided close to its attachment to the globe The wound being enlarged above and below, the finger was introduced, and a large tumor, involving the nerve, was found to exist, and extending deep into the orbit The conjunctiva, fascia and tendons were then all divided as in enucleation, and the eyeball drawn outward The nature of the tumor now became apparent It was of large size, conical in shape, and involved the optic nerve, extending from its insertion into the globe backward into the optic foramen With blunt strabismus hook, and other instruments, the tumor was carefully separated from its attachments, and forcibly drawn forward and divided with curved, probe-pointed scissors, as far back as possible The wound was dressed as after an ordinary enucleation The patient made a rapid recovery, with no complications whatever

There was a fair stump for an artificial eye, which was fitted after some months, as he would not allow one to be fitted sooner Fearing a return of the growth, several subsequent examinations were made, but no enlargements reappeared anywhere in the orbit On April 26, 1887, I received a letter from the father in response to one I wrote to him inquiring as to the present condition of the patient He stated that there had been no further trouble, no tumor having reappeared in the orbit, and that the boy was in good health, and had no trouble in wearing his artificial eye He was nervous and fretful by spells, but was progressing well in his studies, and was active in the usual sports of boys of his age There was still some slight enlargement of the glands of the neck As yet there is certainly no indication of intracranial development of the tumor The other eye remains perfect

From the appearance of the tumor I feared that it already involved the intracranial portion of the nerve, and that it was malignant in character The cut end did not look like normal nerve tissue, but was swollen and softened I gave a guarded prognosis as to the final outcome The very rapid growth during the last few months added to the suspicion of malignancy An examination of the tumor showed that it involved the entire substance of the optic nerve, from its entrance into the bulb as far back as the optic foramen It was about $1\frac{5}{8}$ inch in its longitudinal diameter, and about $1\frac{1}{8}$ inch in its transverse diameter In structure it is a round-celled sarcoma

Case 2 —Miss M W, æt 19, Grand Rapids, Mich, entered my clinic April 4, 1885, giving the following history In May, 1884, she had an attack of frontal headache, accompanied by vertigo and a dull, heavy feeling over both eyes, with a slight pain in the left orbit These symptoms subsided in a few days, except a slight dull pain in the left eye, which has continued up to the present time Some time after this, sight in the left eye commenced to fail gradually, and the eye appeared to bulge slightly This exophthalmus has continued to increase very slowly She could still read coarse print with this eye The vision of the right eye was $\frac{20}{20}$ The ophthalmoscope showed no abnormal appearance of the fundus, the disc showing no change that could be decided as pathological The movement of the eyeball was unimpaired and the protrusion was slight and directly forward The diagnosis was that a tumor probably existed, lying close upon and perhaps involving the optic nerve As useful vision remained, and as there was no rapid growth of the tumor indicating malignancy, the patient was advised to wait until the size of the tumor, rapid growth, or some other condition should call for or warrant an operation for the removal of the growth As useful vision existed, and as there was no prospect of removing the tumor without sacrificing the eye, I did not think operative interference then admissible The patient agreed to return if sight became obliterated and the tumor became more painful, or increased much or rapidly in size

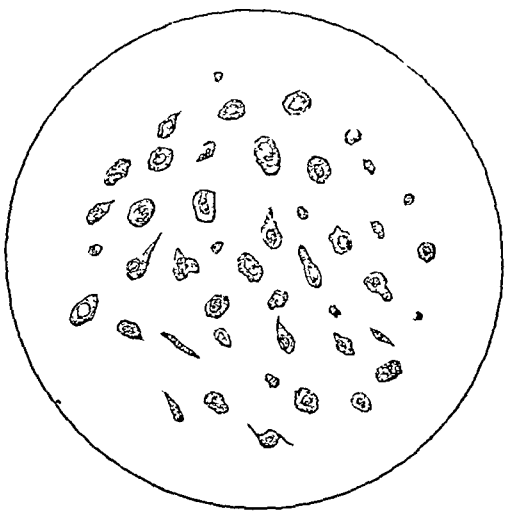
On March 30, 1886, the patient again entered the hospital, stating that there had been but little change in the eye until about two weeks before her return The sight of the eye then rapidly failed, and the eyeball became very prominent The bulging had from that time rapidly increased until the exophthalmus had reached an extreme degree The bulging was directly forward and the motion of the eyeball unimpaired There was a constant dull pain in the eye My diagnosis was a tumor, probably of the optic nerve An immediate operation was advised

On April 3, the patient was etherized and the operation performed with careful antiseptic precautions After a preliminary incision and division of the external rectus, and extending the outer canthus, an exploration was made and the tumor was found to involve the optic nerve I decided not to attempt to save the eyeball but to remove it, together with the tumor Subsequent events proved this to be the wisest course The operation was completed by carefully separating the eyeball and tumor from their connections, drawing the tumor well forward and cutting it off as far back as possible

The wound was then treated as after ordinary enu-

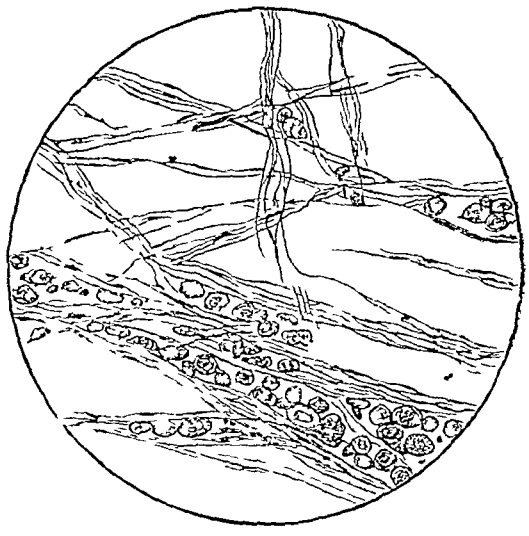
cleation Notwithstanding the antiseptic precautions, severe erysipelatous inflammation supervened, and there were symptoms also of meningitis There was severe headache, and the temperature remained at 103° for nearly two days On the fourth day after the operation the temperature fell to 101°, and in a few days fell to normal There was sloughing of cellular tissue, which on the fourteenth day after the operation had entirely separated, and the swelling had subsided A cavity was thus left that extended to the bottom of the orbit and allowed inspection of the optic foramen, which showed as a depressed surface, with no indication of a return of the growth This opening gradually closed, but led to such deformity and shrinkage of the stump that no attempt was made to fit an artificial eye An examination of the tumor showed it to involve the optic nerve from a point commencing about half an inch back of the eyeball and extending from that point back into the optic foramen The tumor itself was a little more than 1½ inch long and a little more than an inch in its transverse diameter A microscopic examination showed the tumor to be a round celled sarcoma like that found in *Case 1*

The following drawings, prepared by Prof C H Stowell, who kindly made the microscopic examina-



Free Cells from soft portions of Tumor

tions for me, represent the character of the growth. Prof Stowell makes the following report of the result of his examinations of the tumors "An examination of the tumors you gave me, and labeled Nos 1 and 2, results as follows Both growths are of the same structure An examination of the cellular elements shows a vast number of small, round, nucleated cells, with a few spindle shaped cells Sections of these tumors show a stroma of delicate connective tissue For the most part this framework is quite scanty, in one of the growths, near the periphery, it is quite firm and dense In this delicate fibrillar framework, there is a more or less granular intercellular substance Both of these growths represent a *round celled sarcoma* Considering their location, however, they might be classed with the '*gliomata*' of Virchow As I fail to find evidences of myxomata, and as the sarcomata are so marked, each might properly be called a *sarco glioma* "



Stroma and Cells, from denser portions of Tumor

In reply to my letter of inquiry the patient wrote, on the 18th ultimo, that there has never been any pain since her recovery from the operation There has been no return of the tumor within the orbit, and she is perfectly well

Sarcomatous tumors involving other structures of the orbit, excepting when within the eyeball itself, are, in my experience, very liable to recur, especially in children, even when completely extirpated When not completely removed, the operation seems to stimulate the growth

In the cases here reported I had great doubt as to whether or not the tumor involved the intracranial portion of the nerve As yet there seems to be no indication of intracranial development Certainly it could not have been stimulated to more rapid progress by the operation

In a recent case reported by Vossius (1885), where a myxo sarcoma of the optic nerve was removed, the patient made a good recovery in six weeks, though the neoplasm had apparently not been completely removed from the optic foramen Such cases would seem to indicate that sarcomata of this structure have a less malignant tendency than when involving other tissue

GASTRO-INTESTINAL HÆMORRHAGE IN THE NEWBORN

BY HENRY B HEMENWAY, A M , M D ,
OF KALAMAZOO MICH

I desire to present the records of two cases of a type of disease fortunately by no means common I am led to suspect that the malady may be far more frequent than we know, owing to occasional difficulty of detection by one not on the lookout The first case I report occurred in my own practice and in

my own family As I look back upon it, I see that had I been as watchful as I might have been I would have discovered the evil full 40 hours before the time I first suspected it That lost time was precious I will not say that had the case been recognized from the first the little life would have been spared, but surely its chances would have been better I had never known of such a case A medical friend who was present at the birth of the babe looked through his entire library and only found a slight mention of the disorder, with the comment that the disease was so rare that more space could not be spared for its discussion Another, who performed the post-mortem examination, a physician who has had a large practice for many years, told me that the malady was one heretofore unheard of by him Still another, who graduated in medicine in the "fifties," told me that he did not remember ever to have heard or read of such a case The fifth doctor to know of this little history was one whose hair the suns of more than the allotted three score years and ten have whitened, and he has instructed a grandson in the practice of our art He had a vague memory of having somewhere read or heard of such a case, but had never personally known of one

The fact that the ailment is not often met with is no excuse for passing it over lightly One may meet it any time, and he will have no time to read up The rarity of the affection is therefore a reason why it should be most closely studied

I desire to report these cases for two reasons First, to prevent others from being as ignorant as I was Secondly, to learn from a discussion of the subject by those of a wider experience than mine how such cases may be prevented, and if they occur, how they may be cured

Case I—At 4 A M, Tuesday, March 24, 1887, Mrs H, primipara, æt 26, was delivered at term of an apparently healthy female child, weighing about 4½ pounds The mother is a brunette 5 ft 5½ in high, and weighing ordinarily only 115 lbs Her general health is and has been good, excepting a tendency to that state called "nervousness" She walks erect and with a free, easy gait She has never been in the habit of wearing corsets, and during the time the child was being carried she did not wear her clothes tight Previous to her marriage she was troubled with habitual constipation After marriage she had none of this trouble until she became pregnant During that whole period she was obliged to use various means for keeping her rectum empty Since childhood, in spite of this constipation, she had not been as well as during this period She had no unusual nausea or bad feelings of any kind She could walk with ease and was much of the time in the open air For her constipation she took in the line of drugs salts, aloin, strychnia, belladonna, oleoresin of capsicum, cascara sagrada, podophyllin and senna During the last months she used especially an elixir containing the three last named drugs She is one of four girls—no brothers—all similar in build, and healthy Their father, a Scotchman, always healthy until his last years, when he became rheumatic, died at the age of 51 of erysipelas Their mother, of Yankee and Virginian parentage, is to-day in fair health So far as known there is no hæmorrhagic diathesis in any member of Mrs H 's family, further than that one of the sisters has been troubled with menorrhagia, and for a time she herself was similarly afflicted

Mr H, father of the child, dark-complexioned, æt 30, born in Vermont, height 5 ft 8¾ in, weight 138 lbs Though never robust, yet has had good health for the last dozen years In constitution he resembles his father, also a Vermonter, dark complexioned, never robust, height 5 ft 8 in, weight 142 lbs, lived a literary life and died of pernicious anæmia at the age of 53 In the opinion of the late Dr J S Jewell, consultant, this anæmia was due to capillary hæmorrhages into the duodenum Frequently during the last year of his life, when he came back from stool, he would say, "What passed me was as black as your shoe" The mother of Mr H is still living, in good health, æt 59, she had two other sons, no daughters One child died at the age of 4 months of cholera infantum The other is well, æt 17 Mr H never showed any tendency to hæmorrhagic diathesis By a former wife he had a daughter, always strong

Mrs H began to have pains about 10 P M March 23 Examination showed a vertex presentation, in the L O A positon The first stage ended at 3 15 A M, and the bag of waters broke about 3 45 the next morning In two or three pains more the head was born, and the pain continued until the body was also delivered The cord was of ordinary length It was not tied until pulsation through it had about ceased The baby began to cry before her feet were out, and at the same time she passed a large quantity of what looked to be normal meconium She was tall and slim, and though small, she seemed unusually strong She took well to the breast, was bright and slept well She was neither rocked, walked with, nor jolted, but laid down quietly to sleep During this day and the next she had several passages, all being the same in general appearance

On Friday afternoon she cried some and the nurse thought she had colic I could detect no bloating of the abdomen, but prepared a little peppermint in water, with instructions not to use it unless it was necessary We were unable to explain why the liver should be so active The crying increased At 2 A M Saturday the nurse noticed that the water she washed the child off with was tinged with red I examined the discharges, but could not detect any trace of blood by the artificial light and unaided vision At 5 30 we could see the red coloration in the discharges At 2 o'clock I suspected, and at 5 30 I diagnosticated, capillary hæmorrhage into the small intestines We then remembered that there were two small red stains in what she had spit up I therefore concluded that hæmorrhage had been taking place from the mucous membrane, probably of the duodenum, for an unknown period before birth That it did not occur in the large intestine, nor as the result of injury, was made probable from the fact that the blood was so nearly digested

In the line of treatment I could not get satisfac-

tory information from any work consulted I feared to use strong astringents in the alimentary canal of so young a patient I advised, therefore, the application of warm flannels to the feet, and the administration internally of fluid extract of hamamelis, tr opium and fluid extract of ergot, and the occasional administration of cold water At first I gave the medicines in the water Later I gave the namamelis alone in 20-drop doses every half hour, and water occasionally between times Friday P M and during that night she did not nurse as well as formerly After giving her a few doses of medicine the discharges checked, and Saturday forenoon and about noon she nursed well and seemed stronger After that she did not nurse so well again, the discharges came more frequently, and the strength failed considerably From that evening until she died she was fed entirely by the spoon Sunday morning her breathing was regular and her pulse good She gradually lost strength until about 11 P M, when she seemed to be dying I have never seen such a struggle with death Several times she seemed to be taking her last gasp, and then after a short rest the respiration would again begin For five hours the battle lasted, and at 4 o'clock Monday morning, just four days from the time of birth, the little spirit left its cage

At 9 o'clock, five hours after death, my friend Dr J M Snook performed a post mortem examination We found fair rigor mortis There was nothing peculiar in the external appearance except emaciation I regret to say that the thorax was not opened We found little adipose tissue The colons were firmly contracted, and the entire large intestine empty By inspection we could see no indication of disease except in small intestine We could find no apparent obstruction to the portal circulation The mucous membranes of the stomach, duodenum and jejunum were apparently healthy In the upper portion of the ileum the mucous membrane showed general extravasation of the blood, the membrane being dark and presenting numerous dots where the hæmorrhage had occurred The lower portion of the ileum was healthy, and also the mucous membrane of the colons It is not impossible that the disease had extended farther up and that the medicines had partially corrected the evil We were inclined to think so There was no ulceration or perforation of the bowel

Case 2 —Dr H B Osborne, of Kalamazoo, has kindly given me the history of this case from his own practice A well formed child was born about 6 A M one Sunday The parents were about 25 or 30 years old, both light-complexioned, and in good health Mrs D, the mother, is quite inclined to be habitually constipated, and while carrying the child she occasionally took cathartics and laxatives She is slight in build, but did not compress her body while carrying the child She has since had a child, now several months old, that is well and strong Mr D lost a brother some time ago from consumption brought on, he says, by exposure So far as known this is the only case of hereditary disease in either family, and no member of either family has shown a tendency to hæmorrhagic diathesis Two months before time Mrs D came near being confined as the result of over exercise This child was born after a comparatively short labor, breech presenting After the breech was born the labor was finished quickly by the doctor The cord was short, and at time of birth there was some traction upon the umbilicus All seemed well, however, until Monday afternoon The doctor saw the child at noon and all seemed well I think he was called about 2 o'clock, and at that time the nurse showed him a clot of blood that had just been passed per anum He administered ergot in solution, and perhaps some other remedy, but the child died about 8 o'clock Monday evening, 38 hours after birth

Dr O was inclined to think that in his case the hæmorrhage was caused by traction upon the umbilicus at time of birth In my case I am inclined to think that the trouble was due to the use of drugs to regulate the mother's bowels That it was not due to causes at birth is shown from the fact that the hæmorrhages probably took place before birth These *ante natal* hæmorrhages may explain the light weight of the child It is not impossible, considering the grandfather's death, that there is an hereditary tendency in that direction

In the line of treatment there is little to be said Were I to treat another case I would use hamamelis, perhaps strengthened with a little tannic acid, and ergot I would put confidence in the former in proportion as the trouble seemed to be high up I should aim to give 1 teaspoonful of the hamamelis every hour, and about 1 drop of ergot per hour, according to symptoms I would use milk to sustain the strength I used in my case a little brandy, but I was not pleased with its effect What is needed is *food*, not stimulants Cool drinks should be prescribed, as the effect of cold is refreshing and salutary The extremities must be kept warm by artificial means if necessary The child must be kept quiet If it is much restless or in pain I would give tr opii, gtt j in water, according to symptoms Should the hæmorrhage occur in the stomach, as shown by hæmorrhagic emesis, I might give a few doses of mineral astringents, and were the trouble clearly located in the large intestine I should probably give a moderately strong astringent enema Generally speaking, however, I think mineral astringents are too irritating to use in this disorder The hæmorrhage may be checked only to give place to a more lasting and painful disorder

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LAVAGE IN THE TREATMENT OF GASTRIC AFFECTIONS

Read before the Philadelphia County Medical Society, November 9, 1887

BY SOLOMON SOLIS COHEN, M D,

OF PHILADELPHIA, PA

Any agent, or any method that promises to enlarge our therapeutic resources against those obstinate conditions of "gastric catarrh," "functional dyspepsia," etc, that are a source of distress to the patient, of annoyance to the physician, and of profit to the

pepsin and patent-medicine manufacturers, deserves at least a respectful consideration The method that I desire briefly to present to the Society this evening—lavage, or irrigation of the stomach—has been employed for many years in Europe, so that it can no longer be considered to be merely on trial In America, however, it has not won general introduction, nor am I aware that any discussion of it has been had before this body This, then, is my excuse for calling attention to a subject in connection with which I have nothing new to communicate

It needed not the discovery of omnipresent bacilli, those evil spirits named "legion" of our modern superstition, floating about, "seeking whom they might devour," to enforce the value of cleanliness The surgeon long ago discovered that clean surfaces would unite more promptly, that a wound kept free from foreign substances and irritating secretions, would undergo a more rapid and more satisfactory course toward repair, than if the conditions were otherwise In the treatment of the more readily accessible mucous surfaces, whether of the eye, the nose, the throat, the vagina, or the urethra, the importance of keeping the parts free from morbid secretions, from the products of desquamation, and other sources of irritation, is not a matter for debate The extension of the same principle to the treatment of affections of the gastric mucous membrane, is but a question of mechanical detail, not of therapeutic justification

Kussmaul, in 1867, employed a doubly-acting stomach pump to irrigate the stomach with alkaline solutions (Carlsbad water), and it is to this observer that we are principally indebted for a study of the method, mechanically and therapeutically It is said, however, by Dujardin Beaumetz, that a French physician, Blatin, had proposed the practice in 1832 It is to another French observer, Fauché, of Paris, who communicated his procedure to the Academy of Medicine in 1879, that we chiefly owe the simplification of the technique by the use of siphonage, a process employed independently by Oser, of Vienna, at about the same time Others have variously modified the details of instrumentation and practice Among those that have contributed most to the popularization of the method, is Dujardin Beaumetz, who applied to it the name *lavage*, by which it is now described

The manner of performing lavage, recommended by the latter observer, is that which I have followed in the few cases in which I could induce private patients to submit to it The results obtained in these cases have been sufficiently encouraging to induce me to continue, at least to propose it, wherever it seems applicable

The apparatus and its employment are sufficiently simple An œsophageal tube with blunt, double-eyed extremity, of flexible rubber, about twenty-eight inches long, and from one-quarter of an inch to a little less than half an inch in diameter—practically an enlarged catheter, and made of similar (the one exhibited having been made by Tiemann & Co , of New York)—is attached by a small section of glass tubing to a soft-rubber tube about one yard in length, into the free extremity, of which a glass or rubber funnel, of from six ounces to eight ounces capacity, is inserted Sometimes the free extremity of the œsophageal tube is slightly stiffened

The patient sits, or stands, facing the physician The œsophageal tube having been dipped into warm water or warm milk, is placed within the entrance of the œsophagus, and is then propelled by successive pushes into the stomach, the process being facilitated by efforts at deglutition on the part of the patient

Many patients quickly learn to introduce and swallow the tube without assistance A mark on the tube shows when a sufficient length has been introduced (say eighteen or nineteen inches) The funnel is then elevated to the level of the patient's forehead, and from a pint to a quart or more of the lavage solution is slowly poured in, the glass junction tube permitting its passage to be watched, and obstruction or attempted regurgitation to be detected The patient's sensations will usually inform us when a sufficient quantity of the solution has entered the stomach As the last portion of liquid disappears from the funnel, the soft-rubber tube is pinched near the extremity, the funnel is rapidly inverted over a receptacle placed upon the floor, and the contents of the stomach are thus removed by siphonage These manœuvers are repeated until the returned fluid is clear

The first introduction of the tube, and possibly the second and third, will occasion more or less dyspnœa, often nausea and retching, rarely vomiting These effects, though partly physical, are largely psychical, and will disappear with tolerance The dyspnœa may be immediately checked by insisting on full inspirations Nausea is overcome as soon as the water enters the stomach, floating the tube away from immediate contact with the mucous membrane In highly neurotic subjects, it may be well to prepare for the operation, at first, by administering full doses of bromides I have tried anointing the end of the tube with a solution of cocaine in glycerin, but cannot claim any striking benefit from the procedure Firm, but skilful handling of the tube is the best sedative

Sometimes during the withdrawal of the solution, solid particles of food (grains of corn in one of my cases) may become impacted in the eyes of the tube, and the flow of liquid will cease A little more of the solution must then be introduced, both to wash away the obstruction and to reestablish the syphon current If the tube should be pushed too far into the cavity of the stomach, it may curve upon itself, and the siphon will not work Withdrawal of the tube for a few inches, will remedy this, if the flow is not readily established, it is said that it may be favored by manipulation of the stomach, and efforts at coughing may be made by the patient I have not had occasion to resort to these devices

When *lavation* alone (washing) is the object of the procedure, a weak alkaline solution is employed, a drachm or two of sodium sulphate, sodium chloride, sodium borate, or sodium bicarbonate, in a quart of warm water, at about 100° F

Should it be considered necessary, however, vari

ous sedative or antiseptic medicaments may be added to the lavage solution Those most highly recommended are resorcin (1 per cent), borac acid (1 per cent), creasote (1 per cent), carbon disulphide water (one part of a solution containing 15 grains to the quart, to two parts of water), charcoal powder (two to four tablespoonfuls), chloroform water (saturated), bismuth subnitrate (two tablespoonfuls to the pint)

In the use of agents like resorcin, carbolic acid, etc , the liability to absorption if the solution be not all removed, must not be forgotten In using what he terms "milk of bismuth," Dujardin Beaumetz advises that the solution be allowed to remain a few minutes in the stomach, so as to allow the bismuth to be deposited, after which the supernatant liquid may be withdrawn

Lavage should be performed when the stomach is empty, therefore, some authors recommend the hour of rising in the morning I have found noon—say four or five hours after a light breakfast—or the same interval after lunch or dinner, to be more convenient for myself, and to answer as well in most instances

One lavation daily is usually enough After a while the intervals may gradually be lengthened, until the process is discontinued

The therapy is sufficiently obvious The effects are said to be most marked in cases of dilatation of the stomach, in which delayed digestion, retention and putrid fermentation of the contents of the stomach, give rise to distressing symptoms In all cases, in which the gastric mucous membrane is in a catarrhal condition, coated with the glairy mucus seen amid vomited matters, or bathed in the sour liquid ejected as "water-brash," in which the production of gastric juice is impeded, or the secretion altered in quality by an abnormal condition of the membrane, extending, perhaps into the tubules, or by the presence of irritative matters, in which fermentation of ingested and retained matters takes place, in short, in the typical case of chronic gastric catarrh or acid dyspepsia, lavage will be found highly useful It removes any undigested matters remaining in the viscus, cleanses it from products of desquamation and morbid secretion, and gently stimulates the glands and absorbents to healthy action In gastralgia, dependent upon the presence of irritating matters, and sometimes in cases apparently idiopathic, lavage with the employment of chloroform or bismuth as a sedative, is said to be productive of cure I have had no opportunity to test the statement personally

In the chronic gastritis of drunkards, the measure is said to be an excellent palliative, nor is hæmatemesis considered a counter indication, unless actual ulceration exists In cancer of the stomach it is useful as a palliative measure, and my first practical acquaintance with this method of treatment was made during my student days, in two cases of gastric carcinoma treated after the method of Kussmaul, with doubly-acting stomach-pump, at the hospital of the Jefferson Medical College, in the clinic of Prof DaCosta

Within the last few years two new applications of the lavage method have been found In 1885, at Kussmaul's clinic, and subsequently by Senator, Rosenthal, and other observers, it has been successfully employed in the treatment of ileus Kussmaul explains this result by the theory of relief to the tension above the point of constriction, caused by gases and accumulated feces, with concomitant restoration of normal peristaltic action Since 1884, Leube and other observers have made chemical and microscopical examinations of the gastric secretions and other matters removed from the stomach at various periods of digestion, and claim to have thus obtained valuable diagnostic indications This subject, however, is beyond the scope of the present communication

While the practice is usually confined to chronic cases, I have had occasion to resort to it in one case of acute indigestion with obstinate vomiting, in a phthisical, slightly hysterical, female, with gratifying result—in that the vomiting, rebellious to diet and medication, yielded to two applications of the stomach tube In this case, before withdrawing the tube, warm milk was introduced into the stomach, a measure advocated by French writers Indeed, there can be little doubt, but that in connection with *gavage*, or forced feeding, irrigation of the stomach assists in maintaining nutrition in phthisis and other wasting diseases

ASEPSIS AND ANTISEPSIS

BY HORATIO R BIGELOW, M D ,
OF WASHINGTON, D C

I have read Dr Ellzey's article "Antiseptics in Medicine and Surgery," in THE JOURNAL, of Oct 8, with more than usual interest, and it is in no spirit of hypercriticism that I object to certain inconsistencies Truth being a correspondence between the order of ideas and the order of phenomena—a just equipoise, so to speak, of the *internal* and *external*, we can only test it by *experience*, and the measure of its worth must be its *verification*

Dr Ellzey has no faith in the surgical antisepsis that obtains largely in most surgical clinics, because the strength of the solutions employed is not germicidal, to be germicidal they would be dangerous to life He uses, nevertheless, sponges, instruments and dressings which he claims are aseptic Has he ever tested his armamentarium with sensitive plates, to see if all the parts thereof were sterile? Has he ever tested his hands and arms just before an operation? Has he ever satisfied himself of the primary sterilization of the catgut? Has he examined the air of the operating room? (See interesting observations made by Dr Fenger, of Chicago) Of what use is it to discard antisepsis in the one case and to practice asepsis in another, unless there be absolute certainty of sterility Dr Fenger says "What influence the asepsis of the material has on the result of the operations as to death or recovery is a question far beyond the scope of these investigations It would require a large statistical material of well ob-

served cases, and more work than could be done by one observer But it may be safe to conclude that it is desirable to work through an abdominal operation with perfect asepsis everywhere, if such a thing is possible The above investigations have shown that such perfect asepsis can be obtained" The asepsis practiced by Dr Fenger are as follows

1 Preparation of operating room, 1 1,000 sublimate used

2 Preparation of operator and assistants, 1-1,000 and 1-2,000 sublimate used

3 Preparation of sponges

4 Testing sponges before used

5 Testing catgut

The sponges and silk were also tested as to their sterility after operations Dr Sternberg recently published an exceedingly valuable paper upon the heat death point of bacteria, showing that the viability was variable

The same holds true of the chemical agents used as germicides, some bacteria being very much more susceptible to the toxic influence than others Of what use is *cleanliness*, if it be not synonymous with antisepsis? Why wash the parts before the operation if it be not with the hope of an aseptic surface? But cleanliness *alone* is not *asepsis*, it is simply a just regard of the great moral canon, which in later days has also grown to be a physiological canon It is done with the primary hope of depriving the parts of that necessary wherewithal for the growth of bacteria It does not kill them, it simply modifies the nutrient Add to this, however, subsequent washings with ether (or lemon juice), and the mercuric chloride, and we not only arrive at an *aseptic* surface, but we have reason to believe that we have killed out any pre-existing colonies We have taken superfluous fat and dirt from the skin (which washing alone with water and soap will not accomplish) which are favorable nutrient media, and we have destroyed any germs, without detriment to the patient's health

We have then an aseptic *surface* and an aseptic *environment* (if all the precautions mentioned by Fenger, and observed by careful surgeons generally, have been attended to), two factors which could not possibly obtain from the use of soap and water alone But although the patient, operator and assistants may have taken sublimate baths just prior to the operation, their exposure to the air, if only for a moment, may make them carriers of germs—and colonies will often appear in the room during an operation, which were absent in the beginning Hence in many operating rooms a strong carbolic spray is kept playing during the entire duration of an operation, *not as a germicide*, but to prevent so far as possible the development of germs from extraneous sources, in a room which had been rendered aseptic Iodoform largely used as a dressing *is* a germicide of suppurative cocci, not only so, but it prevents the wound from furnishing the suppurative changes which are absolutely necessary for the development of the cocci Salicylic and boracic acids used within the abdomen as germicides, have not been followed with bad results, so far as my observation shows me Mercuric chloride I have never seen used within the cavity more than three or four times, and then in small quantity It was followed by no bad results Within the vagina I have seen it used, in all of the accepted strengths, for long periods of time, without bad results I believe that it is *quite* possible to reach all parts of the vaginal tract, by intelligent irrigation, and to rid it of germs by the employment of the mercuric chloride, and although I have seen many hundreds of plastic operations on the utero-vaginal tract in which mercuric irrigation was resorted to, I have never known of one that suffered therefrom

There seems to be really very little real distinction between the two words viewed in the light of general acceptance and practice Dr Ellzey's *asepsis* is merely modified antisepsis An instrument or sponge is rendered aseptic through antiseptic precautions, whether this be accomplished by chemical combination or merely by hot water He uses on instruments and dressings precautions of chemical equivalent which he denies to the body He therefore simply limits his range and practice of antiseptics—for if hot water will prevent sepsis in a certain sense it may be said to be antiseptic Surgical cleanliness and surgical antisepsis are synonymous terms Water or soap and water are not adequate, especially inadequate are they as applied to instruments The germicidal property of the antiseptic is not the only thing aimed at It is used as a preventive of incubation, and as a preventive of such process we aim at *perfect* cleanliness Constant irrigation with a 1 2000 mercuric chloride solution or a 2 per cent carbolic solution upon the vagina are rarely, if ever, attended with bad results Perfect cleanliness, with all that it implies, is best obtained, according to my ideas, and generally obtained by the use of a chemical Boiling water in an *aseptic* room is antiseptic, but there is always an ever present probability that the water may become impregnated from the surrounding atmosphere Kept at the boiling point and immediately used at this temperature is almost impossible, and constant irrigation with it is not practicable Now the entire object of the after dressing is to exclude atmospheric conditions The air then *does* contain a something to be feared, and why use every possible means to avoid a disastrous contingency *after* an operation that is always present while the patient is on the table?

We use *antiseptic* dressings to prevent the formative tissue changes that develop and keep vital germ life, and not solely and simply to exclude air We are never sure that our operating room is aseptic, hence the possibility of latent potency in the air itself—only awaiting the degenerative process to become active We *sterilize* the wound in the best way that intelligence dictates to prevent the changes that are fertilizing elements of bacteria They that rail at antisepsis and cry for cleanliness are really playing upon terms They both arrive at the same end, by almost the same logical process that the surgeon does who uses the sublimate, for surgical cleanliness implies surgical antisepsis

The only question is, How best may we obtain surgical cleanliness? Are these microorganisms the specific source? What relation do the "ptomaines"

bear to the poisonous processes? To what extent may mental conditions engender the pathological processes we now attribute to "ptomaines?" Bacteriology, though still in swaddling clothes, is fast learning to walk alone To the surgeon the infant has been as great a surprise as was the Great Physician to the Hebrew doctors It has given them a knowledge of the destruction of these organisms outside the body Dr Ellzey says we do not know the optimum of temperature for septic germs Dr Steinberg's tables are fashioned to meet just such doubts To his objections of the strength for germicidal properties of the mercuric chloride, it may be said that we have a more than approximate knowledge not only of the strength of the chloride necessary to act as germicidal in the different kinds of microorganisms, but that this investigation has embraced many of the other chemical agents employed for similar purposes There can be no single test of germicidal strength Spores are often wonderfully resistant, and the spores of anthrax require much stronger solutions than do spores of other germs The spores of anthrax are the only ones that resist the action of creoline But pus germs and the usual run of bacteria with which the surgeon has to do battle, are more easily affected

Dr Ellzey writes, "It is for the destruction of bacteria and their spores that we use antiseptics" This is but a partial statement of the case, since in their use we also hope to change the media, or rather to preserve the media at normal, so that the pathogenic bacteria may not develop Dr Ellzey further says, "The use of carbolic acid should be confined to the disinfection of instruments, and for this purpose its strength should be rather more than 1 to 10" The statement seems to me to be unsound, In the first place it may be doubted if this strength would make a contaminated instrument thoroughly aseptic The most reliable agent is dry heat, and the most convenient apparatus a Koch's sterilizing oven There are spores that resist a 10 per cent carbolic solution, and hence for germicidal purposes we use the bichloride That a few, a very few deaths in comparison with the thousands treated, may have been directly due to mercuric poisoning may not be gainsaid, but we do not discard ether, chloroform or opium because deaths have resulted from their use Individual susceptibility and idiosyncrasy is not always discoverable beforehand I have seen the mercuric solutions in strength from 1-1000 to 1 5000 in many hundreds of plastic operations, with irrigation lasting from fifteen to forty-five minutes, without any bad results I have seen tests made upon the vaginal secretions just after such irrigations in which no pathogenic germs were discoverable I have seen certainly four or five hundred women whose uteri were curetted and in whom uterine mercuric irrigation was before and after the operation and there were no symptoms of intoxication I have seen its employment in Spaeth's and Braun's wards in Vienna for three months, and heard of nothing untoward though the material was vast Ehrendorfer frequently introduces pencils containing 70 grains of iodoform into a uterus, after labor, without any symptoms of iodoform intoxication Martin's operating room is always thick with carbolic spray, but he never has had unpleasant results although some of the spectators present found it irritating

But after all, the discussion is hardly necessary for Dr Ellzey's asepsis is very good, though limited antisepsis He renders his hands, arms, sponges and silk aseptic by antiseptic means, and washes the part to be operated upon with mercuric chloride It would be well for surgery in general if all surgeons would be equally conscientious

Berlin, Oct 27, 1887

RAPID DILATATION OF THE CERVIX UTERI, ITS AGENCY IN THE TREATMENT OF FLEXIONS, STRICTURE, CHRONIC ENDO-TRACHELITIS, CONICAL CERVIX, DYSMENORRHŒA

Read before the St Louis Medical Society, Nov 26, 1887

BY YOUNG H BOND, M D,

GYNECOLOGIST TO ST LUKE'S HOSPITAL, CONSULTING PHYSICIAN TO ST LOUIS FEMALE HOSPITAL ST LOUIS

To Dr Mackintosh, of Edinburgh, is due the credit of having first directed the attention of the profession to the mechanical cause of certain cases of dysmenorrhœa, and the suggestion of mechanical means for its relief, consisting of gradual dilatation of the cervical canal by means of flexible bougies, or by metallic rods of gradually increasing volume

Rigby was the first to use a dilator with steel blades, which were opened and left for some time in the cervix Raynaud, of Montauban, Simpson, Sims, and others sought to accomplish the same ends by the use of different materials, as dilators, such as metallic stems, wax bougies, aluminum and other metals Simpson and Sims lived to repudiate this method of treatment, and substituted therefor incisions In 1871, Dr J Protheroe Smith, of London, in setting forth his plan of treating certain cases of dysmenorrhœa and sterility, said that after giving Dr Simpson's plan of incision a fair trial, he gave up the use of the hysterotome, and adopted forcible dilatation, using a dilator made after the model of Heurteloupe's lithotrite, by which he conceived it practicable to dilate permanently the constricted os internum, and afterward, when necessary, to give the normal shape to the os tincæ, by dividing it laterally at the commissure of the labia uteri

He confined this treatment to simple stricture of the os internum, and narrowing of the cervical canal and os, excluding as inapplicable all cases, even of this class, until all inflammation of the parts had been relieved His method consisted in accustoming the uterine canal to the presence of a metal bougie, introduced daily, of increasing size to a number 10, then the dilator was employed cautiously every second day, desisting from dilatations so soon as pain was produced

Proceeding in this way, in the course of a few days or weeks, as the case might be, he succeeded in dilating the canal to the extent of an inch or an inch and a half After this the dilator was used daily

for two or three days, and afterwards at increasing intervals, to maintain the patency of the parts until they permanently healed in the state of distension

In 1873, Dr John Ball, of Brooklyn, read a paper before the King's County Medical Society, of N Y, advocating dilatation of the cervix uteri in a far more rapid, forcible and heroic manner than had even before been supposed prudent or admissible, and recommending it as a means of relieving stricture, endo cervicitis, flexions, etc Accompanying this paper was the report of a number of cases of mechanical dysmenorrhœa dependent upon the above conditions that had been completely cured by this daring mode of treatment Dr Ball accomplished at one sitting, or treatment what Dr Smith achieved by gradual steps, the one gave to the operation an extensive field of application, the other a limited one

The method as practiced by Dr Ball, with variations of devices and technique, and its indications, as presented in his paper, has received the sanction of all that have practiced it sufficiently to judge of its merits

Its utility and worth are fully recognized by the daily practice of such men as Goodell, Wiley, Marcy, Ellinger, Schultze, and others Almost without exception, they that have had extensive experience in this method of treating mechanical dysmenorrhœa, and the inflammatory states of the uterus originating therefrom, speak in the most encouraging manner of its efficacy and safety, while its chief opponents are to be found opposing it upon theoretical grounds, and not because of any adverse experience in its practice

The practical ends of most cases in which forcible dilatation is indicated, can be met by one of two degrees of dilatation, viz dilatation to a moderate extent, sufficient to permanently increase the cervical canal, of relatively moderate insufficiency, to admit the use of the curette, of the ready and efficient application of remedies to the endometrium and cervical mucous surface, to facilitate explorations of the uterine cavity, etc, this method of dilatation I daily practice at my office

The second degree is that of divulsion, the practice of which always presupposes the use of ether or chloroform, its chief indication is to be found in the cure of flexions, and conditions incident thereto, the ready and thorough exploration of the uterine cavity, for diagnostic purposes, to facilitate the removal therefrom of tumors, growths, etc, for the relief of conical and elongated cervix, stricture and consequent sterility

Before detailing the minutiæ of my method of procedure in using rapid dilatation it may be well to remind you in a general way of the modes of treatment in general use for the relief of those forms of mechanical dysmenorrhœa involving a diminution or interruption to greater or less extent of the uterine or cervical canal

The generally recognized treatment, for a number of years since, has consisted in either dilatation or incision The methods of dilatation, gradual and rapid, the means of the former, sounds, specula, tents, sponge, sea tangle and tupelo, the means of the latter, expanding instruments, Ellinger's, Wiley's, Goodell's, Sims', Schultze's, Wathen's and others, incisions are practiced after the method of Simpson, by means of the hysterotome, or by Sims' method, or by the combined method The unsatisfactory results from the use of sounds, the failure to effect continued perviousness of the canal, has caused them to be well nigh discarded in this connection

Tents are still used to a considerable extent, notwithstanding the fact that they are sadly disappointing in results sought for, a common feature of failure with them all is a want of permancy of the dilatation accomplished Their action is slow, tedious, and uncertain, involving much loss of time with very little, if any, compensating advantage The sponge tent as a dilating agent, is the most efficient of its class, and at the same time the most dangerous, because of the liability to septicæmia from its use, a result that has followed in an uncomfortably large number of cases

Notwithstanding the indulgence of much ingenuity in their antiseptic construction and use incisions are wrong in principle, in some instances necessarily uncertain in extent of tissue divided, more or less dangerous, and unless immediately followed by the plug or stem pessary, or by the daily use of the bougie or dressing-forceps, utterly fail of their purpose

From practical observation and experience, I have become fully committed to the propriety, wisdom and efficiency of rapid dilatation for the relief of all forms of what might appropriately be termed obstructive dysmenorrhœa, conditions embraced in stricture, conical cervix, flexions, etc There are those that advance extravagant claims for electricity in the treatment of the conditions that I have enumerated I regard it as an important subsidiary agent, but as a principal agent of treatment I do not believe that it is comparable to divulsion in the correction of strongly established flexions I regard it as a most important means in the effectual treatment of endometritis, and of permanent value in the relief of that hitherto most obstinate and persistent disease, endo cervicitis I believe it to be the only means of radically curing firmly established flexions, certainly it is the only means that end in my hands

In practicing forcible dilatation to a moderate extent no anæsthetic is needed, perfect antiseptic precautions should be observed, exercise immediately thereafter, beyond a moderate extent, should be prohibited The method that I pursue in practicing dilatation in the second degree, that of divulsion, is the following

Having previously by careful examination excluded the possibility of any extra-uterine inflammation or condition, neoplasm, etc, that might contra indicate the measure, regard being given to the proper evacuation of the bowels and bladder, and all needed instruments immersed and kept in a 5 per cent solution of carbolic acid pending the operation, pledgets of absorbent cotton pressed out of a bichloride solution, 1 2000, just ready, the patient being thoroughly etherized is placed in the Sims' position, the vulva and surrounding parts are sponged off with a 1 2000 bichloride solution

A Sims' speculum being introduced, the vagina, cervical and uterine canals are thoroughly cleansed with the bichloride solution, the anterior lip of the cervix is seized with a double hooked tenaculum and drawn down toward the vulva, then taking in hand a Wiley Sims' dilator, I dip its blades in pure carbolic acid, and having shaken off any excess of acid, I introduce them into the cervical canal, and dilate sufficiently to readily admit of the introduction of the Sims' dilator, which I prefer at this stage for the reason that the dilatation can by its use be regulated more easily as to duration, and its extent more easily determined The advantage of the Wiley Sims' dilator consists in its more ready introduction into a distorted canal in consequence of its small points and curved direction

I usually consume from ten minutes to a half hour in accomplishing the divulsion, the degree of resistance determining largely the length of time The dilator removed, should there exist endo cervicitis, as is usually the case, with a Sims' instrument, I thoroughly curette the mucous lining of the cervix, then with the bichloride solution I again cleanse the genital tract, and taking from a solution of pure carbolic acid one of Wiley's hard rubber plugs, of suitable length and size, I pass it into the dilated passage, and secure its retention by means of antiseptic tampons

Should no untoward symptom arise, this plug is left in for forty eight hours, at the expiration of which time it is removed and the entire genital passage antiseptically cleansed and another similar plug introduced, the same antiseptic precautions being observed as previously, and this course is continued for one week The plug is then left out for several days, after which it is re introduced with the same precaution as before and worn for twenty-four hours, and so on till the approach of the second menstruation following the operation

The use of the plug is intermitted during the menstrual flow, reference to which should determine the time of the operation The patient during all the time that the plug is worn is confined to her bed, and most invariably assumes the dorsal position, it being the most comfortable Her diet is light and simple during the first week For the first two or three days after the operation the bowels are confined and the water drawn off, an opiate enema is administered should the occurence of pain require it, though the amount of pain complained of is usually inconsiderable

Rationale It is not difficult to understand the rationale of this procedure in the treatment of stricture of the cervix, whether it be congenital or acquired, for by it we tear asunder the circular muscular fibres of the cervix, we rupture them at various points, influenced by their varied attachments and relations, one set of muscles here, another there, and so on throughout their distribution, rather than at some fixed and definite line, as in the case of the incision If the circular fibres of the cervix all acted from the same fixed point, there could not exist the objection to the practice of incision, that I entertain, and I believe very justly

By incision injury is done to the longitudinal as well as the circular muscular fibres, by dilatation the integrity of the circular fibres is interrupted at various irregular points, whilst that of the longitudinal fibres being unaffected is exerted in shortening the cervix and increasing its transverse diameter And practically, this is just what I have observed after divulging a conical, narrow and elongated cervix It is not necessary to amputate any portion of such a cervix, as has been improperly taught—divulsion gives it normal shape and function

The immediate agency of dilatation in the treatment of endo cervicitis has already been sufficiently indicated, its mediate effect lies in removing the stricture or flexion, of which endo cervicitis is the result

In treating of the *modus operandi* of divulsion in curing flexions, I do not think it necessary or essential that I should enter into any extended consideration of the subject of flexions, suffice to say that I regard flexions or distortions as consequences of malnutrition of the uterus, occasioned by some infirmity or depravity of the general system, either uterine or extra uterine, involving an embarrassment of the nervous or vascular supply of the uterus, or possibly implicating both the nervous and vascular elements

As specially pointed out by Graily Hewitt, malnutrition of the uterus is manifested by undue softness of its walls, the impairment of the condition of the tissues results in a loss of that normal healthy rigidity of the walls of the uterus by virtue of which it preserves its shape and form amid the buffetings of surrounding organs If, during the period of uterine ramollescence, the isthmus be fixed by utero sacral cellulitis, a moderate excess of intra abdominal pressure will occasion anti-flexion, or if there be fixation of the cervix by the bladder systole, with a position of the uterus favoring retroversion, excessive intra-abdominal pressure will produce retroflexion Fixation of the cervix, as indicated by D Berry Hart, is almost an essential in the dynamics of flexions

The uterus having once lost its physiological form, flexion having occurred, is unable by any inherent capacity to effect its own restitution, and when in the course of events there comes a repair of the vascular and trophic lesions, that lead to the undue softness and pliability of its walls, and in consequence there is substituted their physiological firmness, condensation and tonicity throughout, except in certain parts immediately engaged in the flexion, then there will be appreciated the anomalous fact that the conditions of health entail the perpetuation of a consequence of disease

The indications then for the cure of an established flexion will be found to consist in the reestablishment of the physiological state of the uterine walls throughout, and this can be accomplished more readily, certainly and effectually by the treatment that I have indicated, than by any other means that I know of By means of it we break up all adhesions, we straighten the canal, we change the muscular tissues at the point of flexion from an abnormal to a normal state, and we establish the circulation

upon a new and uninterrupted basis By it we span that breach of nutrition that leads to the flexion, with its chain of pathological consequences, and we release our patient from her protean ills

Grand and Page Avenues

NOTES ON HOSPITAL CASES.

VESICAL CALCULUS, MEDIAN LITHOTOMY — RECOVERY RHINOPLASTY, INDIAN METHOD

Read before the Medical Society of the District of Columbia, June 1, 1887

BY JOHN B HAMILTON, M D,

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I regret extremely that my time has been too much occupied to comply with the request of the Corresponding Secretary for a systematic paper, but it occurred to me that the notes of some rather unusual hospital cases might prove interesting to the members of the Society They are therefore presented without alteration from the case notes

Vesical Calculus, Median Lithotomy—Recovery—Case 1 —M L Underwood, sailor, æt 22, admitted to Marine Ward, Providence Hospital, Washington, suffering from an impacted calculus of the urethra, June 10, 1886 He was placed on the operating-table and I found the calculus in the urethra anterior to the bulb An attempt was made to seize the stone by means of the alligator forceps, but it slipped back into the bladder No further operation was attempted at that time, and in a day or two he passed the stone during micturition He was discharged June 25, 1886 He was again admitted January 13, 1887, suffering from the usual symptoms of stone in the bladder, pain more or less constant in the penis, and occasionally a pinkish tinge to the urine There was no hæmorrhage His general condition was excellent, but the vesical pain was severe On passing a sound the stone was discovered, but not very distinct click, and sometimes could not be felt

Median lithotomy was performed by myself in the presence of the class, Jan 30, 1887, and the stone found encysted in the anterior wall of the bladder There was much difficulty in its removal, which was only effected by directing a strong water current against the wall of the bladder He recovered without difficulty, and the patient was discharged February 25, 1887 The stone is one of the common uric acid calculi

Case 2 —Henry Heil, native of Germany, æt 18, admitted to Providence Hospital May 3, 1887 He was of strumous diathesis and his urine contained 10 per cent of albumen On sounding I discovered a stone just behind the prostate He was suffering greatly and was in bad condition Median lithotomy was performed by myself May 8, and an adherent stone found It was dislodged with the scoop, and extracted in the usual manner The bladder was washed out through the wound for two mornings with a weak solution of bichloride of mercury Part of the urine passed by the natural channels on the fourth day, and on the fifth day the wound was closed The patient was discharged recovered May 23, fifteen days after the operation The specimen is a very beautiful one, of the oxalate of lime variety

Rhinoplasty — Indian Method. — John Sheehan, Irishman, æt 35, lost his nose in Ireland in 1861 He had small pox and subsequently syphilis, but the ulcer of the nose following the small pox was slow in healing, and the nasal cartilage was entirely destroyed There were two minute openings to represent the nostrils, but the face had flattened, and only the bridge of the nose was left The patient was admitted to Providence Hospital, and rhinoplasty performed by me January 3, 1886 The operation was done by the Indian method, the flap being raised from the frontal bone, including the periosteum The new nose united by first intention, and a little more than a year after the operation I had his photograph taken, which shows his present appearance, after ample time has elapsed for the usual shrinkage

While this man cannot be said to be in any degree handsome, yet the operation greatly improved him He was frightfully disfigured by the small pox, and the deformity of the lip is due to that cause, and however much one may cavil at his personal appearance, it must be conceded that a happier man never left the hospital As will be seen by the photograph, the wound in the forehead healed without leaving a very prominent scar

NOTE —Dr Martiny, of Lyons, France, has recently brought to the attention of the profession a new form of artificial nose (porcelain), by which the spectacle frame is dispensed with, a maxillary plate is required, which holds the nose in place by means of an upright rod (*Trans Ninth International Medical Congress*, 1887)

MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS —VOLKMANN concludes his paper on surgical tuberculosis (See preceding numbers of THE JOURNAL) with some *general considerations* on the subject

36 The tuberculous character of an affection is not to be doubted when inoculation gives positive results, when the tubercle bacillus is demonstrated, and when the anatomical examination shows the well-known structural changes in the diseased tissues All three conditions are present in the affections described above On the other side, however, it is as yet not proved that tuberculous tissue must *always* present the follicular contraction

37 The spread of tuberculosis takes place through different channels and in very different ways

a The original focus grows

b By the invasion of the tuberculous virus (bacilli) into the lymphatic vessels from the original focus This probably extremely frequent, or almost regular occurrence does not, as a rule, lead to generalization, because the lymph glands not only retain specific pathogenic germs, but in many cases they evidently destroy them The significance of the lymph glands as protective apparatus and filters in local infectious processes is not yet sufficiently appreciated Generalization is, therefore, still very far off, even when the lymph gland becomes tuberculously infected and gravely diseased, as the virus, in case it should leave it and go further, will be retained in glands situated higher up Generalization takes place only when the last lymph gland between the diseased part and the blood current is infected, or the thoracic duct itself becomes diseased

c By the penetration of the tuberculous poison into the serous sac from a neighboring tuberculous focus, and that happens either by the extension of this focus to the internal wall of the sac, or by the invasion by products of suppuration and softening, that contain bacilli The farther spread then takes place in part by the fluid (synovial, exudation, etc) in the sac, and partly by the displacement of the sac-walls by the functional movements of adjacent structures The danger here is especially on account of the size and importance of the serous sac, its lymphatic connections, and further, on whether the sac be soon surrounded by a layer of granulations, that acts as an impossible barrier (though perhaps this has already been done before the introduction of the poison)

d By the tuberculous poison being carried in in the same way, or by the products of suppuration and breaking down in canals and cavities lined with mucous membrane, in which the poison either stagnates, or has to pass out of the organism by roundabout paths in which the mucous membrane is infected by contact, and new miliary eruption takes place The most unfavorable case is, of course, the lungs canalized by the bronchi, in which the virus sets up new foci not only in the bronchi and their immediate surroundings, but the larynx also becomes infected, and, as the sputum is swallowed, the intestines are also infected

e By the penetration of virus from a neighboring focus into a non thrombotic, usually enlarged vessel, especially a vein, or into a lymph tract leading directly into the circulation, so that generalization, acute general miliary tuberculosis, follows Tuberculous disease of a vein-wall from an adjoining focus is to be regarded as the most common cause of this general miliary tuberculosis

When we consider these possibilities we are immediately struck with the fact that tuberculous affections of the bones, the skin, the cellular tissue, the joints, and of the lymph glands are much less dangerous than those of the respiratory organs or of the intestinal tract Fistula ani is, thus, unfavorably situated, since the infectious material can be best quickly carried outwards So far as the danger is concerned, tuberculosis of the urinary organs is no more favorably situated than that of the lungs and intestines Tuberculosis of the testicles can be successfully treated by operation so long as the cord is not diseased

38 The *susceptibility to the tuberculous virus* is in man restricted to certain individuals, and in these to certain times, and to certain organs and tissues

39 This susceptibility is generally received, in the forms of disease with which the surgeon has to do, by hereditary infection But the clinical material of hospitals and clinics is less valuable for statistical purposes here, because the patients can usually give but little information in regard to their immediate relatives or in regard to more remote blood relations The experienced old family physician will, I believe, always declare that fungous inflammations of joints, caries, tuberculous tumors of lymph glands, and the like, do not occur, as a rule, in healthy families — *Langenbeck's Archiv*, Bd 33, Hft 1

(To be continued)

SCRAPING IN SUBCUTANEOUS ULCERATION —IN an article on "Scraping in Surgery," MR T PRIDGIN TEALE, of Leeds, says It is only in recent years that surgeons have recognized how great a power they have acquired over indolent unhealing surfaces by the introduction of the scraper We are mainly indebted to Volkmann, who, in the "spoon" called by his name, has put into our hands an instrument by which indolent granulations, the lining of sinuses and abscesses, unhealthy ulcerating surfaces, lupoid ulcers, and even malignant growths, can be roughly rasped away, leaving a sound surface well supplied with blood vessels, and disposed to fall into rapid healing To the out-patient departments of hospitals this new power should be an inestimable boon Cases of strumous sores and sinuses, and ulcerated legs, that reappeared week after week, and month after month, can now, by the expenditure of two or three months in hospital, be turned out healed, or so far advanced in healing that a week or two of home care will complete the cure Even ophthalmic surgeons are falling under the spell of this new power, and are learning to compress, within a few days, the treatment of cases that often ... ed on a

weary course of attendance for months Such are tinea tarsi, ulcers of the cornea and granular lids, eczematous ulceration of nostrils, lips and eyelids

Subcutaneous Ulceration —My earliest experiences in scraping were in those remarkable cases of extensive subcutaneous ulceration that show almost an incapacity to heal, and that, from their superficial likeness to the sores and sinuses leading to dead bone, I used to speak of as "necrosis of fascia," acknowledging, at the same time, that the name was indefensible In such cases we find large sores with sinuses leading to extensive cavities between the cutaneous tissues and the fascia covering the muscles, lined with granulations and more or less of half sloughy areolar tissue These undermining are often very extensive, and involve, at times, half or two-thirds of the subcutaneous area of the thigh or leg, the lower extremity having been, in my experience, the most frequent seat of this kind of trouble Formerly we should have said that such a surface could not heal because the patient was strumous or of weak constitution Now we can almost guarantee that all, however extensive, or of however long standing, shall be healed in a very few weeks

The worst case of the kind that ever came under my charge was that of a girl about 18, whose left leg and thigh were covered with sores, from which sinuses led to undermined patches of skin, so extensive that in consequence the leg was rigidly fixed at an acute angle with the thigh, and she appeared to be a hopeless cripple—aged and worn out in appearance, and such as one might have condemned as hopelessly strumous The course of treatment in such a case, spread over two or three operations, would be as follows All visible granulations are roughly scraped off a series of sores The cavities and sinuses are then in like manner stripped by scraping off their granular, ulcerative, or sloughy lining, and these undermining cavities are provided with effective drainage by incisions, at the extremity of every pouch or pocket, perhaps an inch and a half in length, and T-shaped or semicircular, as a security against premature healing By these incisions it is provided that no subsequent effusion of blood or serum can possibly collect and lodge All fluid must ooze out and escape, and the walls must fall into contact, and in the main adhere by first intention The cavities are then well syringed by carbolic acid solution (1 in 60), and generally are lined by a thinly spread coating of iodoform The whole is packed up with an abundant padding of salicylic silk or absorbent cotton-wool charged with with an antiseptic drug Occasionally it is well to insert a drainage-tube from point to point As there is at first considerable sero-sanguineous oozing, it is wise to change the dressing in about twenty four hours, dressing the new surfaces freely with iodoform, and covering again with a large absorbent pad, which ought not to need renewal for several days In a fortnight all but the drainage points are, as a rule, healed The girl in question was, in a few weeks, healed of her sores, was thriving in appearance, and actually recovered full use and movement of her leg without any aid whatever from passive motion or division of tendon —*Liverpool Medico-Chirurgical Journal*, January, 1887

PYRIDIN IN ASTHMA —In the course of former experiments RENZI observed that besides lessening the number of respirations, pyridin also increased the energy of the heart's systole He therefore tested it in severe cases of heart disease, two of aortic insufficiency, one case of pericarditis, one of parenchymatous nephritis with weakened heart, and one case of mitral stenosis

He first gave the pyridin in doses of from 6 to 10 drops, diluted with two or three drachms of water, and gradually increased the dose to 25 drops In the cases of nephritis and mitral stenosis there was no improvement, but in the others there was a strengthening of the systolic impulse, and the number of beats was lessened The blood-pressure was increased A systolic action was allayed more readily by pyridin than by digitalis, and it has no cumulative effects Angina pectoris, that often complicates such cases, was more benefited by pyridin than by anything else —*Centralbl fur klinische Medicin*, No 46, 1887

TREATMENT OF TAPEWORM —DR K BETTELHEIM recommends the following mixture, made into pills

Ext filicis maris aeth	10 grams
Ext pumicæ granati	10 "
Pulv jalap	3 "

℞ Make 70 pills, coat with keratin

From 15 to 20 of these are to be given on the day of fasting, which is preceded by purgation, and the remainder of the pills are given on the following day, in two or three hours When necessary, this treatment is followed by a purge The object of the keratin coating is to prevent the solution of the pills until they pass into the intestines In this way nausea, vomiting, and other discomforts and annoyances so often associated with the taking of vermifuges, are avoided —*Centralbl fur klin Med*, No 46, 1887

COCA EXTRACT IN PAINFUL AFFECTIONS OF THE STOMACH —In the last two years and a half D'ARDENNE has treated many cases of painful affections of the stomach with coca extract, for the purpose of relieving the pain In the cases associated with structural lesions of the stomach-walls the relief was of short duration and incomplete, but in the purely functional cases the pain was always caused to disappear, however severe the attack, and though the usual remedies had been employed in vain The dose used was 2 grains of the extract, every two hours —*Revue Gen de Clinique et de Therapeutique*, Oct 6, 1887

CHLORAL HYDRATE IN RABIES —BROWN SEQUARD reports a series of experiments on rabbits and birds, in which he produced a kind of rabies by injecting oil of tansey This rabies he was able to control by the vapor and subcutaneous injections of chloral Brown Séquard thinks that, from analogy, chloral is a preventive of true rabies He refers to his previous writings on this subject, and to cases in man in which he exemplified his theory —*L'Union Medicale*, Nov 5, 1887

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, DECEMBER 10, 1887

THE HYGIENIC TREATMENT OF STRUMA

DR WILLIAM ALEXANDER, of Liverpool, records, in the *Liverpool Medico-Chirurgical Journal*, his experience in the treatment of struma at the Liverpool Workhouse Infirmary At this hospital the so called strumous ophthalmia, and strumous disease of the joints and glands constitute the staple diseases of the children patients

For the treatment of strumous ophthalmia a country house was selected near the city, and a careful, competent and zealous nurse appointed, and to this place the children were sent as soon as the acute symptoms of ophthalmia had passed away Here the local treatment of the eyes was continued, being aided by the fresh air, plenty of exercise, and more wholesome surroundings The treatment seems to have been successful, though the author's language is somewhat obscure "Since that time only a few cases of ophthalmia percolate the Workhouse Infirmary, to be finally cured at Maghull (the place of the country house) " But he further says that no eyes are now lost, and that not many children exhibit those patchy eyes that were at one time an almost certain result of residence in workhouses Dr Alexander concludes that "a thorough cure of strumous ophthalmia by country air is the only remedy worth considering in chronic cases The part of the country to which the child should be sent is not a matter of any great importance, provided the place is healthy and not too cold "

In regard to surgical treatment of strumous glands of the neck, Dr Alexander looks upon this with more favor as his experience grows, especially taken in connection with the medicinal and hygienic treatment "The most favorable case for operation is when a single gland inflames and is about to suppurate By a small clean incision the capsule of the gland is exposed, the capsule cleared, and the whole gland removed entire The incision is accurately closed, the hole whence the gland was taken is drained, and a scarcely perceptible scar takes the place of a sinus that would under expectant treatment have kept open for months, leaving a puckered cicatrix at the end of that time Any enlarged movable glands are also removed at the time of operation " When the capsule of the gland is so thinned or adherent to surrounding structures that it cannot be removed entire without a formidable operation, it is opened by the usual small incision, the pus evacuated, and the capsule carefully dissected out The cavity is then dusted with iodoform, provision made for drainage, and the wound carefully closed To attack the very bad cases of scrofulous glands of the neck, the surgeon must, of course, be very certain of his anatomical knowledge of the neck, so as to avoid important structures in opening the sinuses that generally lead down to cavities filled with strumous débris Dr Alexander uses the finger as a director and a narrow gouge as an excavator, the cavity is cleared out and explored, especially as to any communications existing between it and other sinuses If such communications exist the sinuous tracts are well cleared out, opened up, and filled with carbolized oiled lint, iodoform gauze, or some other antiseptic material If irritation and inflammation are produced by this procedure a warm linseed poultice gives great relief, which should be removed when the inflammatory symptoms have subsided, usually in twenty-four or forty-eight hours, and the disinfecting treatment be resumed until the cavity heals from the bottom Recurring glandular enlargements and abscesses, near to or remote from the seat of operation, should be attacked in the same way, cleaned out and freely drained, all the sinuses and deposits of cheesy material must be completely eradicated

Simple glandular swellings, indolent and firm, should never, in the opinion of Dr Alexander, be attacked by the knife However formidable they look, he says, they disappear very rapidly under the medicinal and hygienic treatment he describes Internally he uses the syrup of the iodide of iron, and externally the linimentum potassii iodidi cum sapone. "Blistering by iodine paint, or the application of the tincture externally, seems to be harmful rather than beneficial Many of these glandular swellings *arise* from the irritation of the throat or scalp or teeth,"

and in the treatment of them he would avoid all irritation The neck should be kept comfortably warm by some soft clothing, or by cotton-wool The liniment is rubbed in very gently, but effectually, before a fire, and the cotton-wool applied as soon as the inunction is done A thin and anæmic patient of course needs cod-liver oil and good food, but if the patient be plump and fat, as is sometimes the case, the oil is not necessary, and the food should not be too oleaginous Very stimulating diet should be avoided in all cases "But the diet is a secondary consideration, and depends upon the extent to which the hygienic treatment can be carried out "

However well it may be built and appointed, a hospital is not the place for the hygienic treatment of struma "A sedentary, lazy, well-fed life is the least productive of an active and efficient circulation of either blood or lymph Patients with glandular swellings not requiring surgical treatment should move about as much as possible in the open air, and receive medicinal treatment at home rather than in a hospital The hygienic treatment, to be of marked benefit, should last over two months, and more While over-fatigue is to be avoided, the patient should take as much exercise in the open air as possible, the throat being well protected from wind and rain While a low-lying country is not so well suited for these cases as a hilly one, and while the sea-coast is preferable to the inland, yet it must be said that the country, whatever it may be, is better than the city, and infinitely better than the wards of a hospital

In the hygienic treatment of strumous joint disease time, next to situation, is the chief element of success Surgeons that have read Dr Alexander's Jacksonian prize essay on hip disease will read with interest what he has to say of the hygienic treatment of strumous joints He finds that a sanitarium that is suitable for strumous glands does not agree so well with cases of strumous joint disease, and he is inclined to look upon the difference rather as indirect and accidental than as attributable to purely climatic influences Of course, locomotion being impaired in cases of strumous joints, a hilly or mountainous country is less suitable for them than is a flat country When the joint disease is so far cured as not to seriously interfere with locomotion, the patient will do well almost anywhere in the country When the patient is sent to the country from a hospital after a long and acute illness the change is, of course, very great, and is aptly compared to the cold morning plunge of a healthy person He should be well protected, and at first the stay out in the open air should be limited Such a patient should not be subjected to hospital discipline for form's sake

TYPHOID FEVER AND DEFICIENT WATER SUPPLY

During the last few years, many instances have been chronicled in both the medical and secular press, suggesting an important connection between the unusual prevalence of typhoid fever and very low water in the streams, wells or other sources of water supply During the latter part of the past summer and autumn, in many parts of the Mississippi Valley, an extraordinary drouth has prevailed, not only drying up the smaller streams and wells, but reducing the water in the larger rivers to an extraordinarily low level, and coincidently come reports from many localities of the unusual prevalence of fevers, especially of a typhoid type, and in some of dysentery also During the last few weeks, in Cincinnati, where the Ohio River has been lower than at any time for six or seven years past, the typhoid fever has become so decidedly epidemic as to attract the attention of all classes, and especially of the medical societies of that city The disease is reported as not unusually severe, but the number of cases is so large as to cause the number of deaths reported to have reached forty per week

While we do not doubt the importance of the coincidence of extreme low water and typhoid fever, etiologically, some facts have passed under our observation that suggest the importance of two other factors of importance beside the low water One of these is the occurrence of a season of unusual high water, or flood, immediately preceding the season of extreme drouth, and the other is a marked deficiency in atmospheric currents or winds during the dry part of the season, as compared with the average of a series of years in the same localities Our attention was attracted to these additional factors or circumstances during the summer and autumn of 1881, when there was an epidemic prevalence of typhoid fever in Chicago and its suburbs During the eight months from April to December of 1881, there were reported to the Health Office 527 deaths from the fever, when the usual number for the same months for the two or three preceding years was less than 200 each year In searching for the causes for so great a prevalence for that year, it was ascertained that an unusual flood had existed in the months of March and April, after which there had not been sufficient rainfall to fairly wet the dust of the streets until the end of the summer months, and the records of the Signal Service station showed an aggregate of several thousand miles less of atmospheric currents than in the corresponding part of the preceding years

DEATH OF SIR WILLIAM MCARTHUR —Sir William Mc Arthur, Mayor of London in 1881, and who will be remembered by the visitors to the Seventh International Congress that attended the reception at the Mansion House, died suddenly on November 16, after hurrying to catch a train

SPECIAL ARTICLE.

THE CONGRESS AT WASHINGTON

For the purpose of giving our readers impartial opinions concerning the success of the Ninth International Medical Congress, recently held in Washington, we early copied the full and gratifying expressions of the London *Lancet* and the *British Medical Journal*, and in furtherance of the same object we now give the following from a good authority in Paris [1]

"We did not wish to take any part in the controversy that arose in the columns of the principal medical journals of Paris, on the subject of the *success*, or *non success*, of the recent Congress at Washington

"Some were enthusiastic over the importance of the work, and at the kind reception given to the foreign learned men Others found through the pen of their correspondents rather slight appreciation Newspapers of *rapid information* registered in succession the pro and the contra

"For every impartial mind, the accounts rendered of the sessions, which were sent to Europe through the obliging and disinterested care of the *Medical Record* of New York, bring perfectly to light the number and value of the daily communications and addresses in the general sessions Besides, these works are impressed on one with a novelty and originality not generally met with in Congresses of this kind

"As to all that is relative to the American customs, studied at the receptions in the Pension Hall and White House, one should have a little more indulgence for the large reunions of men, for without crossing the Atlantic, one could see the same actions, and analogous incidents (as at the shaking of hands with President Cleveland) being produced at the aristocratic Court of Vienna during the Congress of Hygiene, and, if it were permitted to recall the fact, at the ultra democratic receptions at the City Hall in Paris Therefore, away with the system of *two weights* and *two measures!*

"Besides, in a letter addressed to the *Medical Bulletin*, Dr Landolt praises very much, and with right, the reception that the learned Frenchmen received from their colleagues in America, not those in the middle of the tumult of a Congress, but in their hospitals, in their laboratories, even at the threshold of their activity The criticisms, modelled by a certain journalist in his "*Voyage of Study*," against Mr Hamilton, cannot attach to the eminent Secretary General of the Congress All our private correspondence, even that written by our American colleagues, who for personal reasons, abstained from taking part in the organization and working of the Congress at Washington, are unanimous in acknowledging that he maintained himself with credit under all the circumstances connected with the arduous task that he had accepted

"And we, that have the good fortune of knowing for a long time the intellectual activity, the exquisite politeness and presence of mind of our colleague of the French Society of Hygiene, are very happy over the impartial and generous appreciation of Dr Landolt, and let us conclude with the hope of seeing next, the important scientific works of Dr Hamilton rewarded with the title of *foreign corresponding member* of the Academy of Medicine of Paris "

[1] Journal d Hygiène, Nov 10, 1887

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA

Stated Meeting, June 1, 1887

THE PRESIDENT, JOS TABER JOHNSON, M D, IN THE CHAIR

DR J FORD THOMPSON reported a case of

DEATH FROM SHOCK DURING AMPUTATION

He said that the unfortunate accident was the first of the kind that had ever happened in his practice, and while he was not proud of the termination, he would nevertheless report the case The patient was a man who had sustained a compound comminuted fracture of the leg just below the knee, about four weeks previous to his first visit, which was yesterday He did nothing at that visit, but called again this morning

He then found that the fracture was entirely ununited and that the soft parts were in a very bad condition, the thigh being infiltrated with pus up to its junction with the body He opened up some of the abscesses in the thigh and then went at once for his instruments in order to amputate, as no time was to be lost in performing an operation that would, in his opinion, give the man at least a small chance of life

Having made everything ready he proceeded at once with the operation, Dr Friederich administering the ether while Dr Cutts assisted him, there being besides the son and a friend of the patient in the room during the whole proceeding

Before beginning the operation Dr Friederich had called his attention to the fact that the man was taking ether badly, but as he had been given a good dose of whiskey there seemed to be no particular danger, so he went on With the intention of doing a modified Carden he made the anterior flap long and of skin, the apex of flap being over the middle of the patella The posterior flap was made from skin and muscle, and the femur was sawn through about 1½ inch above the condyles

At the first stick of the knife bloody pus gushed out from sinuses in every direction in the thigh The tissues on all sides were extremely friable and came off in great shreds and sloughs in his fingers Having performed the amputation he washed out the sinuses as well as possible, and stripped the femoral vessels, in their sheath, of the surrounding tissue He then opened the sheath and ligated the artery, putting also an extra ligature about ¼ in above the first The vein was then tied Upon removing the tourniquet there was no hæmorrhage from any source Long drainage-tubes were then put into the sinuses in the thigh and he was about to put in the sutures, when his attention was called to the low condition of the man, who was pulseless at the wrist and gasping for breath Having seen such conditions before he simply gave some whiskey hypodermatically, and proceeded at once to finish the operation While completing this the limbs were kept elevated and artificial respiration was kept up—the ether having been withdrawn some minutes previously

Having dressed the stump he turned his attention to the patient, who appeared to be sinking rapidly More whiskey and some ether were injected, while artificial respiration and other appropriate expedients were tried There was a revival of the respiration for a few minutes and the skin got warm, though the pulse never came back to the wrist In the hope of getting him to vomit, and thus stimulate the heart, he passed a catheter well down into the œsophagus and injected about two ounces of brandy and water into the stomach This did not succeed, however, and the patient went into collapse and died after having been worked on for over an hour The heart ceased a short time before the respirations

This is the first accident of the kind that he has ever had happen to him, and while in this case the man was in a wretched condition from the first, he had no reason to believe that a fatal termination would immediately follow the operation The ether had been administered carefully and not much had been given

DR J B HAMILTON said that he knew something about the case just reported, and would supplement Dr Thompson's statements He had been called to see the man the night of his accident, about four weeks ago He found a fracture just below the knee but he thought that it did not extend into the joint Amputation was advised at once, but his people would not permit it, and besides there was so much shock that he was the more willing not to do it The wound was then drawn as close as possible and the limb was swung in an apparatus He saw him a few days later and found him weaker than at first and much emaciated, though there had been no chill nor anything to indicate septicæmia He saw the patient a third time about two weeks ago, and at this visit he opened a sinus in the popliteal space and evacuated about a quart of pus He told the attending physician that the man would probably die whether his leg was amputated or not He heard nothing more of the case until Dr Thompson reported it

He thinks that Dr Thompson's patient died of shock—a not uncommon complication in such cases Three years ago a young sailor was admitted into the Providence Hospital with a compound fracture of the femur just above the knee-joint The accident had happened six weeks previously and the man was in a very low state, so that amputation was not thought advisable Suppuration of the wound was going on, so he was treated with small doses of the bichloride of mercury, and after a time he appeared to have recuperated some Suppuration continuing however, amputation was performed Not much blood was lost, and just after the removal of the limb he noticed that there was not the natural oozing of the parts The ether had been stopped The patient was in a state of collapse, and died in spite of every effort to save him Shock and pyæmia were probably the causes of death

DR J B HAMILTON gave the histories of

TWO CASES OF LITHOTOMY, WITH SPECIMENS, A CASE OF RHINOPLASTY, WITH PHOTOGRAPH

(See p 752)

DR J FORD THOMPSON said that the subject of the best way for the removal of vesical calculi was being very much discussed at the present time While his own favorite operation for small stones is the median perineal, he thought that the first stone exhibited by Dr Hamilton, being small and soft, might better have been removed by lithotrity (Dr H explained that the stone was encysted in the anterior wall of the bladder and could not have been reached by a lithotrite) Dr Thompson said that in that case, of course, his criticism did not hold good We have four principal operations for removing a calculus For his part, in the young, with a small hard stone, he prefers the median perineal incision It is true that this is objectionable on account of the impotence which may follow it, yet the operation is so successful in regard to mortality that it is being largely done

The great trouble with Bigelow's lithopaxy is that it is very difficult to completely evacuate the bladder after the crushing Even Thompson's evacuator, which is better than Bigelow's, is not perfect, so he has himself adopted the practice of inserting a large-size tube, filling the bladder with water and then letting the pieces of stone escape with the return current The operation is undoubtedly a valuable one, though it was said when supra-pubic lithotomy was introduced, that the days of lithotrity had passed

After performing lithopaxy upon a man who had had albumen in the urine for years, and having, as he thought, completely emptied the bladder of fragments, he put in a searcher and struck a piece of stone Being unable to reach it with the lithotrite, he did median lithotomy Within 24 hours the man had the most intense pain in the right knee with much swelling He opened the abscess and dressed it antiseptically, but the man died after a month, without, however, having had any bladder symptoms The trouble was pyæmia, which came on in 24 hours after the operation

At present von Dittel and Ultzman, of Vienna, teach that the supra pubic lithotomy is the only scientific operation It is certainly applicable when

there is a large stone, especially in children In old cases with large stone the bladder is apt to be contracted and hence difficult to reach from above This can in part be overcome by the water bag in the rectum In his opinion, while the supra pubic operation has become a well recognized one, it will never entirely take the place of all other operations, each of which has its particular sphere

Last week he saw a boy who had fallen and fractured the bridge of his nose seven years before No doctor had attended him at the time The nose was perfectly flat at the bridge, the vomer having been driven in and the sides crushed He considers this a difficult case to operate upon, as, before doing anything in this situation, we must be sure that we can at least benefit the deformity Plastic operations for the restoration of the nose are not, as a rule, very satisfactory when there has been much loss of tissue, though Billroth will remove the whole nose for epithelioma and make a very good substitute by the plastic operation

DR HAMILTON said that the results of the median lithotomy were certainly satisfactory so far as the immediate relief to the patient goes Bigelow's operation is unsatisfactory in some ways and is not applicable to children with narrow urethræ, while the supra pubic operation has had its rises and falls for many years As far back as 1867 he saw a surgeon do this operation

In removing the flap for the nose depicted he took up the periosteum with the skin, and when this flap was brought down the column was made from the periosteum The nostrils were kept open with tubes, while the nose was moulded by the ordinary dough method

OBSTETRICAL SOCIETY OF PHILADELPHIA

Stated Meeting, Thursday, October 6, 1887

THE PRESIDENT, THOMAS M DRYSDALE, M D , IN THE CHAIR

(*Continued from page 725*)

DR M PRICE reported a case of

ADHERENT INTESTINES FROM PERITONITIS, SIMULATING FIBROID TUMOR

Mary J , colored, æt 17 years, received a kick in the belly from a horse, about eighteen months ago She was confined to her bed for a number of weeks and was a confirmed invalid up to the time of operation, suffering great pain in the lower part of the abdomen, the region of the injury She was unable to work or do anything towards her own maintenance Upon examination a hard mass was found high up and to the right of the uterus Owing to her condition and the repeated efforts for her relief, it was decided to open her and see if the offending cause could be removed I opened her, June 17, 1887, Drs C Penrose and J Price assisting, and Dr Welsh present The bowels were found completely matted together, with an ill defined mass at the right side Nothing was found that could be removed The omentum could not be found Dr J Price suggested the separation of all the old adhesions of the bowels, peritoneum and mesentery, which I at once proceeded to do These adhesions involved the entire length of the small intestine, binding the folds of the mesentery and knuckles of intestine in one solid mass The adhesions were of such strength that many of them had to be cut through with scissors The scissors, hand and sponge were the instruments used in the separation of the adhesions This method was followed until every knuckle of intestine and fold of peritoneum and omentum was separated The bowel was almost completely occluded by the bands Complete irrigation with distilled water at a temperature of 110° was used After this operation was completed the indurated mass could not be found She reacted well and was freely purged with Epsom salts She made an uninterrupted recovery, and said she had less pain the day after operation than at any time after the kick I have seen her frequently since the operation She is perfectly well and able to be about her work As a distinct surgical procedure I know of no similar case on record I opened a man a year ago for great pain in the region of the gall bladder, and tore open the adherent viscera from the abdominal wall so as to complete my examination, but finding nothing wrong, closed up the incision The pain was cured! But this operation was not performed with the same object in view as in the first case Dr Duncan, in his book on "Diseases of Women," p 49, gives a case in point I remember a case diagnosed as a fibroid tumor of the uterus, a hard rounded mass as big as a child's head, above the brim of the pelvis, very tender and slightly fixing the uterus The young lady died, and at the post mortem examination it was found that there was no fibrous tumor at all It was adhesive perimetritis, a pocket of coherent intestines, which formed a hard mass and had led to the deception of eminent and experienced gynecologists "

DR M PRICE also reported a case of

SPINDLE CELLED SARCOMA OF THE OVARY

Mrs M , æt 44 years, married twenty years, sterile, always regular, had always enjoyed good health up to January 1, 1887, when she was greatly troubled with inability to hold her water and with constant pelvic pain, with a feeling of fulness and an entire suppression of the menstrual flow, which had been regular up to that date The incontinence of urine was relieved about the middle of February by the escape of the tumor into the abdominal cavity The tumor grew rapidly, and when it had reached some two inches above the umbilicus the patient thought she might be pregnant and sought advice as to her condition Upon examination I found the uterus small the left ovary and tube healthy and posterior to the tumor The right ovary could not be found, but in its position the pedicle of the tumor could be mapped out The removal of the tumor was advised Operation June 11, 1887, with assistance of Drs J Price, Burns and Penrose A spindle celled sarcoma of the ovary, weighing 5 lbs , was removed The

patient reacted well On the evening of the second day there was a slight rise of temperature and quickening of the pulse Fearing peritonitis, I ordered a tablespoonful of Epsom salts every two hours until the bowels were freely moved Six doses were given The next day the pains had disappeared and temperature was normal She has made a perfect recovery

DR DRYSDALE remarked that the successful result of the operation in this case was a proof of its justifiability, but he thought that, generally speaking, it would be of doubtful advantage to perform abdominal section for the relief of the consequences of peritonitis, as adhesions would be likely to reform immediately after the operation

DR PRICE explained that the active movements excited by the Epsom salts prevented new adhesions from forming He made some remarks on ovarian tumors and stated that, although seeming to be of fibroid character and called fibroid at time of removal, microscopic examination had, in his experience, uniformly shown them to be spindle-celled sarcomata

DR PARISH remarked that it is always allowable to break up inflammatory adhesions in abdominal operations The new adhesions formed are not firm

DR H A KELLY, a year ago, had examined a small tumor, about the size of a pea, distinctly arising from the ovary, and found it to be a fibroid, it was quite hard He had, three months ago, removed from a girl of 11 years a large sarcoma of the ovary She recovered The intestines might be bound together into a mass by plastic lymph, and if there was no unnatural position of any portion, no kinks nor strangulation, no symptoms would be developed The patient would feel no pain and would be conscious of nothing wrong In an operation all bands and local adhesions should be broken up, and kinks or knuckles should be liberated

DR J PRICE said that trouble will sometimes follow breaking up of old adhesions in the removal of cystoma, local pain and alarming local and general symptoms He thinks the matting together of the intestines resulting from general peritonitis a cause of death in some few cases, and could be averted by prompt surgical interference He described a case which he had seen recently as consultant, and in which he advised immediate operation The attending physician would not consent until he thought his patient dying from peritonitis The abdomen was now opened and the pus and lymph removed by irrigation and sponging, all adhesions were freed, and the patient commenced to improve immediately, and is to-day a well woman The operation was the only way in which her life could be saved In his brother's case the intestines were freed by free dissection, pressure was applied afterwards to hold the intestines back in the loins and keep them immobilized The hæmorrhage during these operations was very slight Dr J Hoffman had in a recent operation in which Dr Price assisted him, found fourteen inches of the large intestines adherent in an operation for the relief of an umbilical hernia, requiring a long and masterly dissection If such adhesions are not liberated, the operation of dividing the stricture and simply liberating the strangulated portion may be a failure in saving life Here again Mr Tait, in his deep surgical wisdom, recognizes the importance of opening the abdomen for strangulated hernia in the median line, that inflammatory adhesions and strictures may be liberated in the most scientific manner Adhesions in pelvic inflammations are very common, and in operations they should always be released Hard bodies are frequently discovered in the tubes and ovaries Their appearance suggests fibroid growths, but they are in reality sarcomatous The round ligaments alone do not seem liable to disease

DR MONTGOMERY was very much interested in the subject of this paper The method of first breaking up the adhesions and then preventing their reproduction by peristaltic motion excited by saline purgatives, is similar in principle to the treatment of anchylosis in joints, breaking up adhesions and passive motion subsequently Doubtless all present can bear witness to the beneficial action of saline laxatives in dysentery and other inflammatory intestinal affections He had recently assisted Dr Warder in the removal of an abdominal growth The diagnosis had been interine fibroid, but when the abdomen was opened the tumor was found to be of ovarian origin It was very large and hard Dr Daland had made an examination of it and reported it to be fibroid in character There was considerable ascitic fluid

DR LONGAKER made some remarks on the clinical history of adhesions Some months ago, the specimens from a case of obstruction of the bowels ending in death were shown by him at the Pathological Society This was a case of encysted, retrouterine hæmatocele, the appendages on both sides being involved in the mass of adhesions, from which there passed a band to the lower portion of the descending colon about nine inches above the sigmoid flexure, where it was so attached as to form an acute flexure At this point the bowel was in a gangrenous state and the colon above was greatly distended, while the portion below the obstruction had a lumen just admitting the passage of the little finger The patient manifested no symptom of difficulty until four or five days after labor, when some nausea and vomiting occurred The points of interest are that while the autopsy demonstrated the feasibility of an operation, the symptoms were at no time sufficiently definite to warrant a diagnosis The patient must have had the trouble a long time without its giving rise to any but vague and indefinite symptoms As involution of the uterus took place this knuckle of bowel was slowly dragged down into the pelvis

DR M PRICE, in closing, said the appearance of his first described patient was remarkable The long continued suffering from peritonitis had so wasted her that she looked as if she had been passed through a wringing machine, her chest and belly were flattened out If no symptoms resulted from the adhesions there would be no call to operate for their relief But in all cases the intestines have sharp bends and curves, and form knuckles which are caught under lymph bands which tie the intestines together and contract them, and sooner or later symptoms of obstruction must be developed He

does not believe in antiseptic surgery as applied to the abdomen and the peritoneum If he did believe in microbes, tadpoles and the other insects so much talked about, he would be afraid to operate, for their presence, if all that is said about them were true, would do more harm than the peritonitis and more than the operation would do good

DR W H KELLY considered this a most important subject, and one on which we are greatly in need of enlightenment His own experience had taught him several interesting facts in regard to peritoneal adhesions Bands of adhesion or the adhesion of a small area of intestine in such a way as to make it liable to kink, doubling it sharply on itself, are exceedingly dangerous and should never be allowed to remain But there is a class of adhesions by no means dangerous, not productive of symptoms, and which should not be interfered with We must bear in mind that the adhesion of opposing serous surfaces is a conservative process, preventing the continuous pouring out of effusion, and in event of tuberculous peritonitis probably starving out the disease by taking away its pabulum The least dangerous variety of adhesion is the general adhesion of the gut *in situ* He operated two years ago on a case in which all the intestines adhered, looking like one great bag when the peritoneum was opened It was a case of tubercular peritonitis tending to a cure in this way I simply dried out the peritoneum and besprinkled it with iodoform to check secretion, and the patient, who has been constantly under my eye ever since, has had no trouble from her adhesions Also those cases of adhesions of lesser intestines in the pelvis, in which they lie adherent in normal relative position, in full round curves without kink, do not, so far as I have been able to observe in a large number of cases, ever do harm

(*To be concluded*)

PHILADELPHIA COUNTY MEDICAL SOCIETY

THE PRESIDENT, J SOLIS-COHEN, M D, IN THE CHAIR

Stated Meeting, November 9, 1887

DR SOLOMON SOLIS COHEN read a paper on

LAVAGE IN THE TREATMENT OF GASTRIC AFFECTIONS

(See page 745)

DR J TYSON said I have had some experience with lavage, although I have not employed it in the last ten years In one case of dilatation of the stomach it was used with a great deal of comfort to the patient He learned to introduce the tube, would wash out his stomach, and enjoy a good meal afterward He subsequently passed from under my observation, but I heard of his death, which was, I believe, due to the disease which had caused the dilatation—cancer of the pylorus In a second case in which I employed it, the result was not so satisfactory, and it caused great discomfort

DR W OSLER said I should like to state my experience in the use of irrigation, as this is a measure in which I have been interested for several years In the first place, there is serious objection made to the procedure by at least one half of the patients, on account of the discomfort experienced in the introduction of the tube The soft tube is sometimes very difficult to pass, and sometimes it is necessary to resort to the stiffer tube Where the patient himself performs the operation, it is, of course, better that he should have the soft tube

I am of the opinion that this measure has a much narrower field than the statements of the French and German writers would lead one to infer I should not hesitate to predict that within a few years, when the fashion has subsided, this measure will be confined entirely to cases of obstinate gastric catarrh in which it is of inestimable service, and to cases of dilatation of the stomach, in which it is not only of service, but absolutely indispensable We have no satisfactory treatment for dilatation of the stomach other than irrigation

DR E MARTIN said During my term of service at the University Hospital, this method of treatment was introduced by Dr William Pepper, but our experience was, as Dr Osler has stated, the patients would not remain The measure was tried in six or seven cases, and all but one left The patient who remained experienced marked benefit, he gained in weight, and when he left the hospital six months later, was able to pass the tube himself The difficulty which I have recently experienced in one case is, that the patient would vomit the tube This I overcame by using a stiffer tube

DR J P C GRIFFITH said During the past year I have been much interested in lavage in the diagnosis of diseases of the stomach, the German medical papers having been full of the subject We, in America are, however, unable to study the matter to any great extent, owing to the rebellion of patients to this method of examination German patients appear to be more tractable, and Riegel reports that during the year 1885, he made over 1300 examinations of the gastric juice in 122 cases, and in 1886, tested 134 cases in a similar way Every patient presenting evidences of disease of the stomach was submitted to lavage, and the gastric contents thus obtained were subjected to a chemical examination Riegel's method is to administer to the patient an ordinary mixed meal, and, after about six hours—the stomach should be empty at the end of seven hours—to remove the gastric contents, if possible, undiluted by the employment of water, and to filter them He then tests the filtrate in order to determine especially the presence or absence of hydrochloric acid, and the peptic strength The tests are at once simple and very delicate He employs a variety of these, but the ones which have proved most satisfactory to my hands, and with which I feel most familiar are the reactions with methyl violet and Congo red for hydrochloric acid, and Uffelmann's carbolated iron test, for lactic acid In the presence of a small amount of free hydrochloric acid a dilute solution of methyl violet will turn to a blue color, and Congo red will also be

that the subsequent history of the fœtus is one merely "of development, its attachments merely for nutrition and shelter"

Allow me here to commend to your consideration a small volume, of about 200 pages, upon "Criminal Abortion, its Nature, its Evidence and its Law," by Dr Horatio R Storer The collection of evidence and statistics showing the prevalence of this crime would astonish those who have not given especial attention to the matter, even members of the medical profession I am indebted to this writer for some of the conclusions here presented I would call attention, also, to the fact that our statute also makes makes it a penitentiary offense to advertise or cause to be advertised, or in any manner call attention to or recommend any drug, nostrum, or instrument to be used in the perpetration of this crime The law is ample, Shall it be enforced and its violators brought to justice?

The changes in the law as indicated by the difference in our statutes at other times, are simply the formal legal expression of the changes in public opinion And after all that has been, or may be said by way of criticism, in regard to adherence to precedents, you will find that the laws upon this, and all similar questions, arises to the same moral plane of right and wrong occupied by the people by whom, and for whose benefit and protection, it is enacted It is not the production of abstract theorists It is the essence of human judgment, the concrete of human experience

The question then very naturally arises, if this be true, and with the alarming frequency of the violation of this law, why is the law so rarely enforced—its infraction so rarely punished? In answering this question, the fault or neglect cannot be attributed to any one cause, or any single class in the community There are numerous reasons, among them are secrecy surrounding the act, the lack of moral conviction in the minds of many of the participants, the general absence of all fear of detection, the prevailing of a feeling of "false modesty," the number of persons practicing as physicians who will commit the crime, or contribute towards its commission, and the sacredness of the professional confidence of the regular physicians Honorable practitioners owe it to themselves and to their brethren to drive from the public mind the too prevalent opinion that *money* will induce almost any physician to perpetrate a crime against the laws of God and man

Of the mother, by consent, or by her own hand imbrued with her infant's blood, of the equally guilty father, who counsels it or allows the crime, of the wretches, who by their wholesale murders far out-Herod Burke or Hare, of the public sentiment which palliates, pardons, and would even praise this so common violation of all laws, human and divine, of all instinct, of all reason, all pity, all mercy, all love, we leave those to speak who can

DR SAWYER wished to correct Dr Steele in regard to the frequency of criminal abortion He quoted Cazeaux and La Chapelle as saying that abortions in Paris as were common as labors at term He, himself, had never seen one-tenth the number of abortions hat he had of labors

DR HENROTIN said he had in former years many opportunities to investigate cases of this character He had had the pleasure of bringing several of these criminals to justice, and had been instrumental in sending two of them to the penitentiary The crime, he said, was a very common one Several cases of physicians and others who had been guilty of the offense were mentioned and suggestions as to conviction

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK

(FROM OUR OWN CORRESPONDENT.)

Urethral Calculi—Multiple Calculi—Displaced Calculous Kidney

At the November meeting of the New York County Medical Association some remarkable cases of stone were presented The first was presented by Dr Daniel Brown, who said that the patient, a man 61 years of age, came to him complaining of inability to pass his urine The penis was unusually small, and finding that the meatus, which was of very narrow calibre, was occluded with some hard substance, Dr Brown incised it and removed several calculi After this he practiced gradual dilation of the urethra until a number 18 sound could be passed, and at no time during the process of dilatation was there any evidence presented of stones in the bladder From this time the patient had no further trouble until the end of two years, when he again presented himself suffering from stoppage of urine Calculi were once more found blocking up the urethra, and every day for a considerable period some were removed On one occasion, in endeavoring to get into the bladder, his assistant was unfortunate enough to make a false passage There was marked cystitis, and the patient gradually sank After death the bladder was found to be full of calculi

The question naturally arose, Was this a large stone which had spontaneously ruptured, or were there originally a number of small stones which formed in the kidney and afterwards received accretions in the bladder? The shape of the calculi seemed to indicate that the former was the correct hypothesis, and this was also rendered the more probable by the complete absence of renal colic during the history of the case

The bladder of the patient, that has not as yet been opened, was now presented by Dr J W S Gouley, to whom Dr Brown had transferred it for preservation in the museum of the New York State Medical Association Remarking that to the touch the organ felt like a bag filled with coarse gravel, he laid open its cavity with the knife, when it was found that the walls were somewhat thickened, though not to such an extent as might have been expected under the circumstances The calculi which it contained reached to the upper fundus, and on emptying them out he found that there had been a spontaneous fracture, not of a single large stone, but of a number of smallish stones, the greater part

of which had been too large to be expelled spontaneously There was, however, no urethro vesical obstruction, such as would have been caused by an enlarged prostate, and there was, therefore, no reason why some of them should not have been discharged in this way The mucous membrane was found to be more or less columnar, and in it were a number of little pouches One of these was large enough to admit the end of the little finger, and at this point there was some ulceration of the membane

This, then, Dr Gouley said, was a case of multiple calculi, and it was one of very puzzling character Many explanations had been offered for the spontaneous fragmentation of large stones in the bladder, and there was, indeed, scarcely an authority in this department of surgery who had not brought one forward But in the present instance not one of them was applicable, and he was quite at a loss how to account for the condition of affairs met with Taking up a number of the pieces, he said that he held in his hand no less than eleven distinct nuclei, and that there was not a single entire stone in the mass found in the bladder, which would weigh over a quarter of a pound The extraordinary feature of the case was the spontaneous rupture of all these stones

Dr J R Mac Gregor then related a remarkable case occurring in his practice some years ago The patient, was a lady of 63, who came to him stating that she had had a great deal of pain for a long time in the hypogastric region, and bringing with her a box containing more than 300 calculi that she said she had voided from time to time A vaginal examination revealed the fact that a number of calculi could be felt with the fingers, apparently in the bladder A further examination was made at her own house, when gradual dilatation of the urethra was accomplished with sounds, and a narrow bladed pair of forceps introduced into the bladder Nothing like a stone, however, could be detected, and this attempt gave rise to so much pain and distress that the patient declined any further interference for the time being

She then went out of town for the summer, but by the time that she returned her sufferings had increased to such an extent that she was willing to submit to any procedure that promised relief The late Dr Studley was called in consultation, and ether being administered, the urethra was gradually dilated until the finger could be introduced into the bladder No calculi were found loose in the latter, but plenty of them could be felt covered, apparently, with some sort of a membrane, and it was concluded that the calculi were encysted With the finger nail and a pointed instrument the supposed membrane was ruptured, and two calculi, each about the size of a grain of corn, were extracted The others that were felt receded beyond reach when the effort was made to get at them The discovery was then made that there was also a stone present of very large dimensions, but it was deemed imprudent to attempt anything further on this occasion The patient had taken ether very badly, so that at one time it was necessary to resort to artificial respiration and hypodermic injections of brandy, and she died in about forty eight hours

At the autopsy there was found in the pelvis, an organ resembling the uterus at the fifth month of pregnancy, and on section there was discovered in it a stone of enormous size, together with a very large number of small ones, This organ proved to be the left kidney, that had become displaced and occupied the ordinary situation of the bladder It was flattened out like a large sac, and in it were found more than 520 calculi, while some additional ones were lost in the abdominal cavity The large stone that Dr MacGregor presented was somewhat pear shaped, and weighed no less than 51 ounces It was 6⅜ inches long, and measured 16⅝ inches in its larger circumference, and 12½ inches in its smaller circumference At each end there was an area where the surface had become polished from contact with the small stones- A section of the mass has never been made, but it is supposed to consist mainly of uric acid, although the exterior is thoroughly encrusted with earthy phosphates Dr Mac Gregor then proceeded to refer to some of the cases of unusually large stone reported by various authors, and in conclusion said that with the exception of one that Lister came across in a journey to Paris, the stone now exhibited was the second largest on record

Dr Alfred L Carroll having said that he could not see how the phosphatic coating of the stone could be accounted for unless there had been an opening between the kidney and the neck of the bladder, Dr Gouley stated that he had become convinced from repeated observation that phosphatic deposits frequently occurred in the pelvis of the kidney, and that they might take place in any part of the urinary apparatus In herbivorous animals it was a well known fact that the kind of stone which ordinarily originated in the kidney was the phosphate of lime calculus P B P

DISINFECTION OF GYNECOLOGICAL INSTRUMENTS

Dear Sir —The article of Dr French on the "Chief Source of Danger in the Use of the Uterine Sound," in the August 27th issue of THE JOURNAL, is timely and valuable, yet I cannot let the occasion pass without criticising one point Fritsch is quoted as saying "Always before introducing the uterine sound, dip it into a 5 per cent solution of carbolic acid, even though properly cleaned directly after its previous use "

I do not claim that the single dipping of a sound into a 5 per cent solution of carbolic acid may not prevent septic infection, but from my observation of the manner in which the common gynecological outfit is kept, I can safely assert that either a grinding or polishing would be necessary to remove the incrusted dirt from many sounds As a matter of fact, the method of Fritsch is entirely inefficient as an antiseptic measure The best way to disinfect all gynecological instruments not tempered for cutting purposes, (curettes, placental forceps, sounds, etc ,) is to pass them several times through the flame of a spirit lamp, and then place them in a so-

lution of carbolized water From this solution they should be taken and used, without coming in contact with anything not rendered thoroughly aseptic This efficient and *absolutely reliable* means may also be applied to the instrument used for exploring the bladder

The remarks of Dr French apply with added force to the use of tents of whatever variety Indeed, the dangers from this source have become so great, that many practitioners have discarded tents altogether, though theoretically they should be much less dangerous than divulsion or incision For the past two years I have been specially studying the uterine reflexes, and have had occasion to use the sponge-tent frequently I have thus far escaped the slightest inflammatory reaction or septic infection from their use I am satisfied that the only danger from the use of tents is their liability to convey septic matter They are of a porous material, usually kept loose in a box, or in the physician's obstetric bag, or on his table in the neighborhood of decaying urine, pathological specimens, etc It is surprising that septic infection is not more frequent

My method is to place the tent in a small vial, just large enough to contain it, the neck is filled with absorbent cotton and a cork fitted The bottle is then placed in an ordinary bake oven for one or two days The heat is, of course, sufficient to destroy all germs, and as they cannot obtain ingress, you have a thoroughly aseptic tent, which may be used at any time When introducing them the vagina should first be thoroughly irrigated with a corrosive sublimate solution, and the neck of the uterus wiped out with carbolized glycerin The cork is then removed, and the tent is grasped in a pair of sterilized dressing forceps and introduced A cotton tampon saturated with carbolized glycerin completes a procedure which, if efficiently carried out, will, I am sure, make infection from the use of the sponge-tent a thing of the past

Very truly yours,

HAROLD N MOYER, M D

434 W Adams St , Chicago, Oct 1, 1887

CASE OF HYDATIDIFORM MOLE

Dear Sir —In the issue of THE JOURNAL of November 26, Dr Thos C Smith, of Washington, D C , reports two cases of "Hydatidiform Mole " As I also met with a case a short time since, and in many respects similar to the last of his cases, I beg to submit it to the profession

Mrs W , æt 41, white, has had six children *Previous history* —Several years ago, she tells me her old family physician, now deceased, treated her for "falling of the womb" by introducing a support, but since he died she has used nothing, and has had no trouble until recently, when she called me in, complaining of pains in the back and side, profuse leucorrhœa, and a general feeling of fatigue I advised an examination and an introduction of the proper support, but for various reasons it was postponed She incidentally mentioned that her monthlys had not then appeared for two months Pregnancy was at once suspected, but she persistently denied that such was the case, saying that in her other pregnancy she never felt as she did then I then advanced the idea that the "change of life" was coming on her, but was still suspicious of pregnancy

About a month afterwards I was hastily summoned to her bedside, the messenger saying she was "flooding " On my way there I learned that she had done an unusually large day's work that day, and while she was at the supper table she had suddenly begun to bleed On arrival at the house I found her pale, weak from the loss of blood, and all with the symptoms of previous profuse hæmorrhage An examination was made and revealed an enlarged womb, of about three months' pregnancy, and very painful to the touch, os dilated so that my index finger passed in with some difficulty Hæmorrhage profuse Of course a miscarriage was at once diagnosticated, and the proper treatment of rest in the recumbent posture, opiates and ergot were given, and the patient left for the night The next morning she was still bleeding but not so freely, os and womb in about the same condition The same treatment was continued, and a tampon of cotton applied, and retained for fifteen hours, when it was removed, and I found a handful of hydatidiform bodies in the vagina, and a large piece of what looked to me like placenta was removed from the womb, after which she ceased bleeding and made a rapid recovery She still claims that there was nothing wrong with her, and that she was not *enciente*

Very Respectfully,

J S HACKNEY, M D

Uniontown, Pa , Dec 1, 1887

EHRLICH'S TYPHOID-URINE TEST

Dear Sir —In No 2, vol IX, p 53, of THE JOURNAL, you print what is meant to be the formula for Ehrlich's test of typhoid urine, of which I spoke in May last, before the Association of American Physicians, in Washington In your communication, as also in those of many other journals, there was a serious typographical error, that ought to be corrected in the interest of Professor Ehrlich, but still more so in that of many of your readers The formula is as follows

1 Sodium nitrite, 1 part, aq destill , 200 parts (is liable to be decomposed after from four to ten days)

2 Acid sulfanilic, 5 parts, ac hydrochlor conc pur , 50 parts (not 5), aq destill , 1,000 parts (not 100)

Of 1 take 1 2 parts, of 2 take 50 parts, to form 3

Mix 3 and urine in about equal quantities, and add slowly aq ammon towards neutralization The deep maroon color will soon appear I advise to test normal urine first, or alongside the suspected or morbid specimen Very respectfully,

A JACOBI, M D

110 W Thirty fourth St , New York

NECROLOGY.

R W HOOPER, M D

Robert William Hooper, M D, of Cambridge, Mass, was born in Marbletown, Mass, Oct 25, 1810, died at his residence April 13, 1885 He was the son of John and Eunice Hooper He graduated in letters at Harvard College in 1830, and in medicine in 1836 After having studied some years in Europe, opened an office for practice in Boston In 1837 he married Ellen Sturgis, daughter of Wm Sturgis, merchant of Boston His wife bore him three children and died Nov 3, 1848 The children survive their father Dr Hooper was for many years one of the surgeons of the Massachusetts Charitable Eye and Ear Infirmary For thirty years he was one of the trustees of the Boston Athenæum And for nearly the same time he was connected with the State Hospital for the Insane, at Worcester, of which he was a trustee He was a member of the Massachusetts Medical Society, and also the American Medical Association J M T

RUFUS WOODWARD, M D

Rufus Woodward, M D, son of Dr Samuel B Woodward, who was so distinguished as the first physician of the first State Lunatic Hospital in Massachusetts—the one at Worcester, was born in Weathersfield, Connecticut, Oct 3, 1819, and died at Worcester, Dec 30, 1885 He graduated in the classical department at Harvard College in the class of 1841, and received his degree of M D in the medical school of the same college in 1845 He served as assistant to his father in the Lunatic Hospital, and to Dr George Chandler, who was his father's successor for about five years Resigning this position in 1848, he went to Europe, for further prosecution of study, mostly in Paris, for two years, when he returned to Worcester, and entered upon general practice, which he continued up to the time of his death, visiting patients even to the last day of his life

Dr Woodward held the respect and affection of his patients in an unusual degree, and never failed to deserve their affection and respect, and his professional assistants were even his best friends In his undergraduate course at Cambridge, President Walker took a special interest in him, and wished him to study theology But Dr Woodward was very fond of Natural History from the first, and he preferred the study of medicine, which was akin to it He loved botany especially, as if it were nearer to the Heavenly sunshine

He was one of the original members of the Worcester Society for Medical Improvement He was a founder of the Worcester Natural History Society under the counsel of the first Agassiz A member of the American Antiquarian Society, in one of whose recent publications there is an extended notice of him He was President of the Board of Health, and very efficient In all these offices he was faithful, and his merit was recognized, and resolutions of condolence and of respect on his decease were presented to the family, and spread on the records of the various organizations He was also a member of the American Medical Association since 1880

Dr Woodward was generous by instinct and by cultivation He was always happy, and happier when doing good to others He had no meanness, no malice, and no jealousies And in his death every member of the profession in his neighborhood, felt that the loss was of a good friend and a good man Dr Woodward was married June 12, 1856, to Jane N Fox who survives him They had four children, all of whom are living The oldest, a son, succeeds to his father's practice T S

BOOK REVIEWS.

THE CURSE OF THE WORLD, NARCOTICS Why Used, What Effects, the Remedy With numerous Colored Illustrations By DANIEL WILKINS, A M, Superintendent of the Washingtonian Home Chicago The Blakely Printing Company 1887

This is an octavo volume of 370 pages, published in most excellent style But the attractive features imparted to the volume by the skill of the publishers, affords only a faint index of the remarkable value of its contents The author is a man of high moral and intellectual endowments, of perfect candor, who has devoted forty years of his life to the practical work of reclaiming men from intemperance with a patience, intelligence, and success that has rarely been equaled During the last thirteen years he has been Superintendent of the Washingtonian Home of Chicago, an asylum for the reformation of inebriates, during which he has been brought into intimate personal contact with more than 6,000 inebriates, including almost every variety of intoxication, illustrating every degree of moral, intellectual and physical evil produced by alcoholic liquors and opiates, and has studied the motives, impulses, and needs of each from day to day, with that kindly spirit and earnest interest in their welfare that seldom fails to give him access to their fullest confidence Consequently the views presented in the book before us are the direct result of long continued practical study of the subject, with an ample field for observation The first division of the work discusses, in the most simple and interesting manner, the true influences, motives and impulses that lead to the use of fermented and distilled drinks or opiates, the second illustrates with equal clearness the effects of these agents upon the mental and physical conditions of those who use them, including several neatly executed plates representing actual important pathological conditions, and the third discusses the remedies with a logical directness, fullness of detail, and earnest, loving spirit that will not fail to carry conviction to the mind of every intelligent reader We wish the book could be carefully read, and re read, by every young man in our country

MANUAL OF CLINICAL DIAGNOSIS By DR OTTO SEIFERT AND DR FRIEDRICH MULLER Revised and corrected by Dr Friedrich Muller Translated by WM BUCKINGHAM CANFIELD, A M , M D 8vo, pp 175, with 60 Illustrations New York G P Putnam's Sons 1887 Chicago W T Keener

This little book is what its name signifies, a manual of *clinical* diagnosis It is not limited to the narrow field of physical diagnosis, but considers all that pertains to symptomatology It is without doubt one of the very best books devoted to this subject We have been led to expect of German writers a very diffuse treatment of this subject, but the book before us creates pleasurable surprise at finding it a model of compactness and detail This constitutes one of its chief advantages In reading it we have been constantly more and more pleased with the information and at the way in which it is told us Some statements we would like to see modified, but they are not of prime practical importance For instance, of Curschmann's spiral threads in sputa the authors say they "are observed in capillary bronchitis and bronchial asthma " To be sure, they occur oftenest in these diseases, but also frequently in pneumonia and sometimes in phthisis The sphygmogram is not described with as much fullness as we should like to see And thus a number of minor defects might be pointed out

The fact that in Germany it has already passed through three editions is evidence of its popularity

A MANUAL OF MEDICAL JURISPRUDENCE for the Use of Students at Law and of Medicine By MARSHALL D EWELL, M D , LL D , Professor of Common Law in Union College of Law, Chicago (Law Department of the Northwestern University) Boston Little, Brown & Co 1887

This is a small sized octavo volume of 409 pages, published in good style It includes a brief discussion of most of the topics usually presented in larger works on medical jurisprudence, with so much accuracy and good judgment as to make it an exceedingly convenient manual or text-book for students of both law and medicine Its value is much increased by numerous references to authorities and illustrative cases The author is well known as the writer of several valuable law books, and as an experienced teacher in the Union College of Law, to which he has added a regular education in medicine, thereby acquiring peculiar qualifications for the production of the volume before us

COURIER REVIEW CALL BOOK Arranged by E M WILSON, M D , Ph D J H Chambers & Co St Louis, Chicago, and Atlanta

THE MEDICAL NEWS VISITING LIST for 1888 Philadelphia Lea Brothers & Co ,

We are reminded of the rapid approach of a new year by the appearance of these well known and useful pocket visiting lists and account books Besides the blank pages there are in each a considerable number of printed pages, containing useful information that all physicians need and that often for the moment slips one's memory

THE MEDICAL WORLD VISITING LIST Being a Daily Record of Practice and Accounts without the use of Signs, and hence need no Transferring, arranged in Removable Tablets Published by *Medical World*, Philadelphia

This little book is novel and, we should judge, very convenient because of its small compass Each page is divided Each half is assigned to a patient At the top of the column the name and address are to be entered, and below on each line is the day of the month, and opposite it space to enter character of service and its value One column will hold all the entries for a month

SYPHILIS By JONATHAN HUTCHINSON, F R S, LL D , etc Sm 8vo, pp ix, 532 With 8 chromo-lithographs Philadelphia Lea Brothers & Co Chicago A C McClurg & Co

This is one of the publishers' "Clinical Manuals for Practitioners and Students of Medicine" We feel that Mr Hutchinson needs no introduction to the profession in this country, especially when he writes on syphilis As a clinical exposition of its subject, from the author's standpoint, the book leaves nothing to be desired The colored plates are well executed

MISCELLANEOUS.

DEATH OF DR T R VARICK —Dr Theodore R Varick, of Jersey City, died in that city on November 23, aged sixty one years He received his degree in medicine from the New York University He was well known as a skilful surgeon, and was Surgeon General of New Jersey for seventeen years

NEW BOOKS RECEIVED

Miner's New Index Rerum Pocket Size Ann Arbor, Mich J A Miner

Transactions of the American Surgical Association Vol v, edited by J E Mears, M D Philadelphia P Blakiston, Son & Co 1887

De l'Electricité Comme agent Therapeutique en Gynecologie par Le Docteur Paul F Munde Traduit par Le Docteur P Menière Paris Octave Doin, Editeur 1888

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM NOVEMBER 26, 1887, TO DECEMBER 2 1887

So much of S O 235, A G O , October 8, 1887, as relieves Lt Col Chas T Alexander, Surgeon, from duty at St Louis, Mo , and directs him to report for duty at Ft Meade, Dak , is amended so as to take effect January 1, 1888 S O 274, A G O , November 25, 1887

Capt H P Birmingham, Asst Surgeon, the leave of absence granted by orders No 52, Ft Myers, Va , November 24, is extended twenty three days S O 255, Div Atlantic, November 28, 1887

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THREE WEEKS ENDING DECEMBER 5, 1887

Surgeon Walter Wyman, granted leave of absence for thirty days November 29, 1887

Asst Surgeon L L Williams, granted leave of absence for twenty one days November 18, 1887

Asst Surgeon J J Kinyoun, leave of absence extended seven days November 29, 1887

Asst Surgeon R M Woodward, granted leave of absence for seventeen days December 5, 1887

THE

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ORIGINAL ARTICLES

SPONGE-GRAFTING

Read before Section on Dental and Oral Surgery, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY WM H ATKINSON, M D,

OF NEW YORK

To intelligently understand the advantage of sponge grafting in efforts to secure reproduction of tissues, the societary arrangements among prime elements which lay the foundation of possibilities in functioning bodies must be taken into account Adequate study of these elements will reveal whatever pertains to them in personality and behavior Their origin cannot be seen, and their existence is provable to sensuous cognition only by observation of their aggregative and relational changes Therefore, to say they had beginning is to assume an unprova ble proposition The careers through which they go in molecular, corpuscular, tissual, organic and systemic currents constitute the functions of perceptible body

The first perceptible current is gaseous diffusion, which occurs in mass of diverse gases devoid of active affinity between them, each acting upon its own law of diffusion in occupancy of the chamber limiting the gas, so that each molecule stands equidistant from its fellows, which is known as "Avogadro's law" All diffusion of this sort is a mass motion rather than a molecular activity

The molecular action consists strictly in the formation of molecules and their disruption and reform ation in simple and complicated examples of mole cules, aggregations of which constitute proximate principles

The primal examples of molecular genesis is exhibited in the formation of water, H_2O, in which the diffusion of the two gases is limited to exact chemi cal equivalency of univalence and bivalence of the gases, interpenetrating each other with such intensity of thrust grasp as to produce liquid molecules of the new body, occupying only a fraction of the space the gases filled, leaving in the chamber (now empty of water molecules) only such H or O as found no mates in chemical equivalency When the oxygen is in such excess of the hydrogen as to afford the exact quantity, we have H_2O_2, or peroxide of hydrogen formed, as a distinct new variety of molecular body of less intensity of combining grip than that forming water This affords ready means of oxidation and hydration when hungry bodies are within the sphere of awakening currents of kindred energy

The results of these associative currents give us the bodies naturalists have classified as members of the three kingdoms, as the statical testimony to the typical form of the currents in chemical, physiological and mental movements in consciousness, the measures of which are displayed in protista, pro tophyta, protozoa, and their classified degrees in molusca, invertebrate and vertebrate forms of planetary inhabitants

Interpenetration or diffusion of gas, then, is the first form of feeding within the domain of bodies inhabiting planets, which planets are but masses of stored radiance with some unsatisfied bonds of desire for societary communion, the demand for which is known as hunger The comprehension of desire for more than the individual is conscious of having in possession involves a deep and intricate examination to so formulate it as to command the attention and kindly consideration of those who regard themselves as learned scientists Atomic, interatomic, molecular, inter molecular, gaseous, intergaseous, aqueous, inter aqueous, celloidal, intercelloidal, and solidal and inter solidal impact and diffusion of the impacted energy are the examples of caught and stored radiance upon which all functionable bodies depend

Personality of being (entos) must be accepted and comprehended if we expect to master career of function and factor of function The word person itself bears testimony to its origin as the initiative movement *in esse* producing existences (existere) *Per*, through, and *sonare*, to sound, are the mother and father of the word person Tone, then, is the measure of the stretch of intention limiting modes of consciousness in individual and associate presence in primal, proximate and ultimate forms of personal *Presence* I am aware that this layout starts at an hypothetical assumption of the primal body named atom with static and motic possibilities but does not state the dependence of atoms upon Infinite Substance filling space called ether, the impact of energy from which either communicates the combining and separative power to the atom or awakens latent capacity of career belonging to it

Taking this last statement into account etheric and inter-etheric currents are brought to view as intention, extension and limitation of type of bodies

in conscious formative procession Let us ask *what* and *how*, rather than *who* and *why*, as has been the burden of the spiritist and materialist of the past in the effort to comprehend the nature of things!

Conscious formative process produces, maintains and changes the forms of all the bodies provable to sentient perception, and therefore the bodies with which we become acquainted are products of, rather than producers of the metamorphoses through which we see them pass—progeny to antecedents and progenitors to sequence The occultness of which has been intensified rather than elucidated by the persistence of naturalists in insisting that bodies capable of being seen were produced by bodies like them without accounting for the origin of these progenitors

No end of work in mycological research has thus far resulted in nothing deeper than disputations respecting classification of blood, mucus, pus, proximate principles, pabulum and bacteria, without arriving at a reliable, clearly-proven starting point for function and factor of function without invading the almost untrodden fields of individual consciousness other than in a mass sense of ill-defined formulation of categories of being The limitations of ether, gas, liquid, colloid and solid forms of bodies are measured by degrees of combination, interpenetration and diffusion of energy, the press or urge of which sets up and maintains form, size and longevity or duration of all the bodies observed and observable by the naturalist, viz granule, corpuscle, tissue, organ and system as product of preordained measures of energy, upon the behest of which they all depend

Complete category of being, process and body, then, involves love and wisdom as the moving and directing energies of Infinite Consciousness, the Plenum of Light, filling immensity, the differentiated departments of which are displayed in circles, cycles, and systems of suns, planets and inhabitants of planets *ad infinitum*

The press, then, of the impact or epact of light + in ether awakens bonds of combining power of atoms in definite measure to form the granule, cell and corpuscle, and their aggregations subject to investigation and study by the psychist, physicist, naturalist and philosopher

Clear apprehension of the foregoing will teach the order of production of functioning bodies to be from the simple to the complex in formation and maintenance of individuals in mineral, vegetable and animal forms The stored energy remaining in each so long as it there finds greatest attraction for that particular measure of power which was awakened and engaged in the formation of the crystals, cells or corpuscles constituting the mineral, vegetable or animal bodies under observation

Opportunity for oxidation and hydration, then, is necessary to the formation of crystal—the water of crystallization being an essential element to maintain that form of body for so soon as this is driven out an amorphous powder of the metallic oxide is all that remains for examination

In the case of crystals of silex being deprived of their water of crystallization, opportunity is presented for the hydration of the amorphous silex, and we then have a jelly-like body known as "liquid glass," which upon dehydration returns to the solid crystalline state of silex Oxidation and hydration are the "digestion," "fermentation," "boiling" belonging to and occurring in the mineral kingdom Cellulation is the first act of digestion—fermentation—boiling in vegetable "protoplasm," and is capable of (amenable to) crystallization by dehydration, which is exemplified in a degree in the formation of ligneous fibre out of the cambium, which is protoplasmic When vegetable mass is deoxidized, alkaloidal residue holding high potency of stored radiance results, which may be poison, remedy or food to vegetable or animal feeders

Corpusculation is the first digestory, fermentative, cooking act in animal protoplasm

Nitrification is essential to form animal protoplasm out of vegetable protoplasm

When animal protoplasm is deoxidized leucomaines and ptomaines result upon the completion of the fermentative and putrefactive digestion producing these cadaveric chemical alkaloids

The investigation of these bodies is in its infancy, and we have much to learn before cataloguing all of them that are found, as really chemical individuals with provable identity But we are certainly nearing the point of illumination on this subject which will enable us to detect the antecedents of specific sicknesses more clearly than ever before Shall we not soon be able to antidote or abort all the exanthems resulting from infection by microbes?

I deemed it requisite to deal with histological physiology and retrogressive changes in protoplasmic bodies before detailing manipulations of using sterilized sponges, to fill the gap where tissues are lost, as a receptacle of the exudate to form the clot which is metamorphosed into protoplasm and embryonal corpuscles to form nerve plates, muscle-plates and bone-plates, out of which the new growth of tissue may arise in such exact imitation of the original parts as to defy detection as new growth by any macroscopic examination

The practice has now been followed long enough to confirm the hope and expectation first awakened when, some two years and more since, I was induced to attempt it The liability of failure will be lessened if the requisite conditions be well observed

1 A good state of blood crasis

2 Complete removal of dead or greatly debilitated tissue

3 Equable tension of the sponge graft

4 Complete coaptation of flaps of flesh over sponge graft, excluding all possibility of outward infection

5 Hygienic condition surely maintained First intention will then follow in flesh wounds and thoroughly disinfected old sores

Where it is impossible to secure good flaps large enough to cover in the sponge, I would not abandon the practice of using sponge as a means of filling out the part to normal size, but would let the sponge come fully to the surface and a little more, covering it in with sterilized gauze, over which only light bandages should be used

Two cases have proved failures in my hands, I *now* know because they were inserted before the parts were in proper condition Several partial failures of the sponge to "take" at certain places have made it necessary to clip out the part in which the new growth failed to appear, until the portion with copious "blood islands" afforded evidence of abundant supply by the blood freely following the removal of the sponge, which was without blood in it The "tacked" portion is then disinfected with either bichloride of mercury solution or, what I now prefer, potassio mercuric iodide one sixth as strong as the bichloride of mercury solution My habit is to use the pot merc iod solution (1 grain to 6 ounces of water, with about 1 ounce of alcohol in it to prevent formation of the red iodide of mercury during solution) two or three times a day as a spray, to insure aseptic state of the parts One further statement deemed important is disregard of extant doctrine about the necessity of removing all the blood corpuscles from the site of lesion where we desire to secure healing by first intention

The coagulable character of the whole column of good blood is to be conserved and courted, rather than removed and stanched, until no red corpuscles are in the tract of the wound

The best results I have ever seen have been in cases where coaptation of the lips directly over the sponge, without removing any of the oozing blood, was adopted, the great majority of which sealed up without any pus or other retrogressive form of the clot

My natural timidity, and faith in others almost to a fault, yet stands in the way of instant obedience to the clearer sight of immediate revelation of the *what* and the *how* of surgical procedure It is only that good may be done to like minded men, and through them to suffering humanity, that I earnestly counsel obedience to the revelation of truth in ourselves rather than to abjectly copy the lame instructions embodied in voluminous repetition of the effete doctrine of text-books

The whole system of drainage so strenuously insisted upon in text, and in hospitals, and in private practice, is a mistake, and a tacit confession that the dead and decaying part had not been thoroughly removed and the tract surely aseptic ized

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STATISTICAL REPORT OF 5700 CASES OF EAR-DISEASES, CLASSIFIED BY AGE, SEX, OCCUPATION AND DISEASE, CAUSATION

Read in the Section on Otology of the Ninth International Medical Congress

BY S S BISHOP, M D
OF CHICAGO

The following statistical tables represent the records of 5,700 cases of diseases of the ear treated during the last eight years at the Illinois Charitable Eye and Ear Infirmary, in Chicago I have added a relatively small number of unselected cases from the records of my private practice to supply the place of those whose records were incomplete The purpose for which the classification was begun was to establish a basis of calculation of the influence, if any, exerted by occupation, age or sex in the causation of ear diseases The condition of each patient at the time he first presented himself at the clinic was recorded in order to determine the relative frequency of the different diseases

As is usual in charity hospitals, a very large percentage of those who applied for treatment belonged to that class of laboring people who have no definite trade or fixed occupation It is interesting, also, to note that the last decade embraced what might be called the vagrant era of the century in this country, for there never was a time in the history of America when such vast numbers of men were unemployed and leading nomadic lives This may partly account for the fact that about one third of the adult males are herein classed as being without occupation In order to facilitate investigation and simplify the tables as far as possible, all those occupations which were closely related to one another in nature and effects were grouped under one heading, so that the twenty-four which appear really represent about double that number For example, under the heading of clerks, were embraced salesmen, book keepers, office employés, etc , with teamsters were grouped car drivers, peddlers, etc , cooks and bakers were classed together, brass molders, iron molders, etc , were classified with iron workers, plumbers, gas- and steam-fitters appear together, such closely allied occupations as stone cutters, stone-masons, bricklayers and plasterers, in which the influences and exposures are very similar, are grouped together under the head of day laborers—a term borrowed from the laborers themselves

The abbreviations employed are
Ac for acute inflammation of the middle ear
Ac S for acute suppurative inflammation of the middle ear
C N for chronic non uppurative inflammation of the middle ear
C S , for chronic suppurative inflammation of the middle ear
Ext. for diseases of the external ear
Int for diseases of the internal ear
D M for deaf mutes
W No , for whole number

Occupation	W No	Ac	Ac S	C N	C S	Ext	Int
Miners	10			6	4		
Firemen	10			9	1		
Coopers	10	1	3	5	1		
Butchers	11	1		6	3	1	
Packing House laborers	12	1	1	8	2		
Engineers	13			10	2		1
Cigar makers	15	2	1	6	3	3	
Plumbers	16	2	1	7	1	5	
Boilermakers	19		3	10	3	3	
Tinners	20	1	4	9	5	1	
Shoemakers	22		2	14	1	4	1
Bakers	22	1	2	14	4	1	
Printers	30		2	10	12	5	1
Tailors	31		2	18	8	2	1
Blacksmiths	38	1	2	26	3	5	1
Painters	47	3	1	26	10	6	1
Sailors	47	1	2	28	9	5	2
Railroad laborers	58	2	5	35	12	3	1
Farmers	74		1	55	18		
Carpenters	80	3	4	57	8	6	2
Iron workers	84	4	4	54	11	10	1
Teamsters	85	12	11	33	23	6	
Factory hands	108	6	13	59	19	9	2
Clerks	232	17	19	117	39	36	4
Day laborers	496	27	26	300	77	60	6
Total	1590	85	109	922	279	171	24

SUMMARY

	W No	Ac	Ac S	C N	C S	Ext	Int	D M
Adult males without occupation	810	43	31	485	197	46	7	1
Female adults	1662	75	63	1070	317	106	27	4
Boys, 6 to 15 years	557	35	28	230	205	34	19	6
Girls, 6 to 15 years	562	32	22	225	232	35	11	5
Boys under 6 years	243	11	21	41	125	26	8	11
Girls under 6 years	276	11	26	45	139	38	9	8
Occupations	1590	85	109	922	279	171	24	
TOTAL,	5700	292	300	3018	1494	456	105	35
Per cent of W No		5 1	5 3	53	26	8	2	6

The tables show that more than one-half of all the occupations were in-door Of the 1590 males with fixed occupations, 920 worked out-of doors and 670 in-doors Add 1662 female adults who lead in door lives to the 670 adult males with in door work, and we have 2332 patients that spend most of their lives within doors To the 920 men who do out door labor we may add the 810 adult males who were without trades or any definite means of subsistence, and it gives 1730 men who probably pass most of their days in the open air Thus the excess of patients of the in-door class over those who lead out-door lives amounts to 602, or about 15 per cent of the whole number of adults These facts are significant when we take into account the slight difference between the number of males and females affected under the age of 15 years

Sex seems to have no influence in the production or prevention of these diseases It appears from this that up to the age of 15 years ear-diseases afflict both sexes nearly equally Possibly a reason for the slight difference which appears in the number of male and female cases during the first 15 years of life may be found in the similarity of the lives and habits of the sexes during this early period But the classes of society that afford clinical material at the medical charity institutions of this country are such that necessity requires them to abandon the pursuit of education at about the fifteenth year, and to enter upon bread earning vocations From that time the divergence in habits increases The males are either out-of doors more than ever, or confined chiefly to mercantile houses and factories The females become domestics, clerks and shop girls

American residences and business houses are heated in cold weather by dry hot air and kept at a temperature of 70° F , or higher The inmates are subjected to the action of this dry hot air, often laden with dust and noxious gases, the greater part of every day The skin, consequently, is very active in its functions, and kept moist by free perspiration But, though constant exposure renders the soldier, Spartan-like, indifferent to cold and storms, housing the body makes it tender, like the hot-house plant, and sensitive to sudden and extreme changes in the air After working all a winter day in a temperature of summer heat, these people, with the powers of resistance reduced by fatigue and hunger, pass out immediately into a frigid atmosphere, with the temperature perhaps from 40° to 70° F lower than that of the work shop The skin is chilled, the perspiration checked, and a determination of blood to some internal organ occurs Naso-pharyngeal catarrh is probably the most frequent consequence This result is aided by high winds and the inhalation of dust In fact a very large percentage of naso-pharyngeal catarrh is undoubtedly due to the irritating effects of dust, and this, operating in conjunction with cold damp air, is largely responsible for the wide-spread existence of naso pharyngeal catarrh among Americans It is undoubtedly the most prevalent disease in this country The importance of this fact is obvious when we consider that so large a number of middle-ear affections originate in naso-pharyngeal inflammation which extends from that cavity through the Eustachian tube to the tympanum. Critical examination of the throat demonstrates the existence of throat-trouble in a large proportion of these cases Hence, whatever causes a catarrh of the nose and throat is interesting to the otologist as a proximate cause of ear disease

The exanthemata are frequent causes of ear trouble during childhood, but youth seems to predispose to coryza which is often a forerunner of tubal and tympanic catarrh Children under 15 years of age constitute about 28 5 per cent , or more than one fourth of the whole number of cases Very many of them dated back to attacks of scarlet fever, measles and the earaches and "running ears" of infancy, so that a much larger percentage than appears should probably be credited to the period of childhood Only a small proportion of children were brought for treatment during the acute stage of inflammation Only 13 per cent were acute cases, leaving 87 per cent , or more than six times as many who had not applied for treatment until the inflammation had reached a chronic stage Indeed only 11 per cent of the adults were seen in the acute stage

The tables show a large percentage of diseases of the external ear Since impacted cerumen may be regarded as a symptom and a consequence of chronic non suppurative inflammation of the middle ear, due consideration should be given this fact in estimating the relative frequency of affections of the middle and of the external ear as shown in these tables

It may be permissible to cite a few facts that do not appear in the tables, but which, nevertheless, were impressed upon me by a personal study of this class of patients Although the whole State of Illinois contributed largely to the number embraced by these statistics, a large majority were residents of Chicago, a very cosmopolitan city The foreign element predominates The nationalities were not recorded except in resident infirmary cases, but the Irish constituted a very large, and the French a very small percentage of our clinical material The North of Europe furnishes a far greater percentage of our population than the Southern portions After considering the nationalities it will not be surprising when it is stated that the blondes exceed the brunettes in number

It was observed also that the nervous temperament was the prevailing one Another matter of interest to the etiologist, and to the student of sociology as well, was the conspicuous absence of baldness among these people, for cold draughts of air on heads

deprived of Nature's covering are considered as being a prolific cause of catarrh, by some authorities

This brings us to a consideration of the last topic of this paper climatic causes In speaking of climatic conditions as standing in a causative relation to ear diseases, it should be understood that reference is had to those atmospheric conditions which are characteristic of Chicago and its vicinity, although they may not be peculiar to it A sudden great fall of temperature, accompanied with increased humidity of the air, is usually followed by an increase in the number of new patients with acute diseases of the ear, and of chronic cases with acute symptoms These effects of atmospheric variations occur with such uniformity that we may predict an increase or decrease in the number of acute diseases with a reasonable degree of accuracy by observing the meteorological variations Our climate is rugged, but the people born and reared in it do not seem to partake of its robust character The altitude is low in the Mississippi Valley and the thermometric changes are sudden and great It is not unusual for the thermometer to fall 20° or 30° F , or more, in a few hours Indeed, cold-waves sweep suddenly over the country in summer time, cooling the heated atmosphere so quickly and so thoroughly that one must needs change from summer to winter clothing with haste or suffer from the chilling winds Add to these causes of great circulatory disturbances the irritating effects of constantly inhaled dust, which the ceaseless winds keep in never-ending motion, and the problem of the prevalence of naso pharyngeal, tubal and tympanic catarrh in our climate is in a great measure solved

749 West Adams Street

THE TREATMENT OF HYPOPYON KERATITIS WITH FREQUENT IRRIGATIONS OF CORROSIVE SUBLIMATE

Read in Section on Ophthalmology and Otology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY F C HOTZ, M D ,
OF CHICAGO ILL

Progressive suppuration of the cornea is unquestionably an infectious disease and the destruction of the micro organisms is the surest means of arresting the progress of suppuration On this account the application of white heat (by electro cautery or otherwise) along the line of demarcation has proven so successful that it became a great favorite with ophthalmic surgeons But it is a treatment that cannot be trusted to any one but an expert, it destroys a certain amount of corneal tissue, thereby increasing the loss of substance, and the size of the resultant cicatrix, in the eyes of the laity it looks frightful and may easily create the impression that "the burning of the eye" has done all the mischief, if the case should take an unfavorable termination, and, lastly, the cauterization of the cornea does not affect the micro organisms which may have entered the anterior chamber, and therefore has no effect on the hypopyon and iritis

I therefore thought the question worthy of our consideration, whether we could not attain the destruction of the micro organisms just as promptly, and more thoroughly, by a simpler and less heroic treatment than cauterization, and during the past winter I made a series of experiments to answer this question In deciding upon the drug for my experiments I had to choose one that would be well tolerated by the eye, and passing through the cornea would be diffused in the aqueous humor in sufficient strength to exert its germicidal powers upon the contents and surroundings of the anterior chamber It seemed to me that corrosive sublimate would best fill these requirements A solution of 1 5,000 is not irritating to the eye, it certainly is taken up through the cornea into the anterior chamber, like solutions of atropine or eserine, and though it be greatly diluted by the aqueous humor it is known to be an efficient disinfectant and germicide in much weaker solution than 1 5,000 It was only necessary to keep the aqueous humor continuously charged with sublimate until all infectious germs were destroyed and until there was no possibility of further immigration of micro organisms from the corneal tissue

To accomplish this object the following plan was adopted The conjunctival surface of the lids and globe was thoroughly and repeatedly washed with the solution (1 5,000) until no trace of mucus was discovered in the fluid, then both eyes were bandaged with compresses wrung out of the solution, and the sublimate instilled into the affected eye every hour In dropping the solution into the eye the patient's head was well thrown back, the upper lid was lifted up with the finger and firmly held away from the eyeball for one minute at least, so that during this time the whole cornea was fairly inundated with the instilled solution

As soon as the appearance of the eye showed a decided improvement (and in every case this was manifested in 12 to 24 hours), the intervals between instillations were lengthened to two hours, and from that time on were gradually made longer in proportion to the better condition of the eye, when the hypopyon and the pus infiltration of the cornea had entirely disappeared the applications were reduced to three per day, and kept up until the cicatrization of the ulcer was complete

This treatment seems rather tedious, but when we take into consideration the fact that the frequent instillations are only required for 24 hours, and that any faithful person can attend to them, the treatment appears very simple, and in the 12 cases in which it was tested, it certainly proved very successful In every case, no matter how extensive the infiltration of the cornea and how large the hypopyon, the progress of suppuration was promptly arrested, in 24 hours there was a marked decrease in size of the hypopyon (or, if small, it had disappeared entirely), and of the characteristic cream-yellow infiltration of the edges of the corneal ulcer In no case was the cornea perforated if perforation had not occurred before the patient commenced treatment, and the resultant scars seemed less opaque than I have found them after other modes of treatment

All the cases were kept under observation until the defect in the cornea was completely repaired, the time of treatment varied, of course, according to the gravity of the case Several typical cases of ulcus serpens with small hypopyon recovered in one week, one similar case with pus filling one third of the anterioi chamber got well in 12 days, one other in 18 days, one eye with large central ulcer, with a streak of pus infiltration 4 mm wide, extending from the ulcer down to the lower margin of the cornea, recovered in 3 weeks with only a small haziness in the centre of the cornea Even in the severest cases the time did not extend beyond one month

In one case the treatment was put to a very severe test A little boy 3 years old was brought to me on the 18th of February For three weeks his left eye had been inflamed, and from the first his mother had noticed a yellow spot in the cornea Her physician, making light of the trouble, told her the eye would be well in a few days, but it grew visibly worse from day to day The child was manifestly in great pain, his lips were parched, his tongue dry, his breath very offensive The upper eyelid was swollen enormously, so that it was very difficult to open the eye far enough to examine the cornea The ocular conjunctiva was very red and œdematous, cornea smoky, and in its temporal half a pus infiltrate 7 mm long and 4 mm wide, its irregular borders considerably raised over the level of the surrounding surface In the deeper layers of the cornea the pus extended even far beyond the surface margin of the infiltrate, hypopyon of 4 mm In this case I used the solution 1 2,000 The next day the hypopyon was smaller and the suppuration of the cornea had not advanced On the second day it was decidedly less, on the third day the œdema of the upper lid and the chromosis of the ocular conjunctiva had subsided, and the last trace of hypopyon disappeared By the fourth day the whole area of the corneal abscess was transformed into a simple ulcer with gray margins, and on the 4th of March this ulcer was healed, the gray opacity measuring 4 by 2 mm , the pupil regular and free This case was not in a hospital under the care of a trained nurse, but the treatment was entrusted to the boy's mother, whom I showed the proper way of applying the solution, and who fully understood how much depended upon her following my instructions to the letter

103 State St

CANCER OF THE RECTUM

Read before the Louisville Medical Society,

BY JOS M MATHEWS, M D ,

PROFESSOR OF PRINCIPLES AND PRACTICE OF SURGERY AND CLINICAL LECTURER ON DISEASES OF THE RECTUM, KENTUCKY SCHOOL OF MEDICINE VISITING SURGEON TO LOUISVILLE CITY HOSPITAL AND STS MARY AND ELIZABETH HOSPITAL LOUISVILLE ETC

That was a quaint description of cancer given by Lorenz Heister, in 1731, in which he says "When a scirrhus is not reabsorbed, cannot be arrested, or is not removed by time, it either, spontaneously or from maltreatment, becomes malignant, that is, painful and inflamed, and then we begin to call it cancer " We are amused at this homely definition by the old master, but when we stop long enough to think, we can honestly ask ourselves, "How much beyond this have we advanced in the study of this much dreaded disease?" Even with our much vaunted knowledge of anatomy, histology and pathology, the most learned of us call a halt before pronouncing upon the character of tumors, drawing the line, as it were, between benign and malignant growths The daily press heralds one day that the Crown Prince has a warty excrescence in his throat, the next cablegram is that it is a deadly cancer The great surgeons disagree, and it is agreed to send a *specimen* to the learned Virchow, and have the *microscope* settle the disputed question An American doctor on the Western plains might ask, "What is the use of all this? Can't they tell by looking at and feeling the growth?" In other words, are not the physical signs and clinical history of much more value in determining the nature of suspected tumors, than anything that the microscope can reveal? That the *cells* have proved inefficacious, the *alveolar* formation not a certainty, and *epithelial proliferation* not a guarantee, is admitted, or at least mooted So it may be, as Billroth says, "In a hundred years will they laugh at our present anatomical and clinical definitions of cancer " There are two questions that force themselves upon our attention at once, when dealing with suspicious growths 1 Is it a malignant or non-malignant tumor? 2 Is its removal advisable? To tell a person who comes to you for honest advice, that they suffer from cancer, when there is a doubt, is little less than criminal, and yet there are circumstances that might demand a positive opinion, if such was held I am not in the habit of telling my patients of the existence of cancer By so doing I am satisfied that life is shortened Thus we see that a diagnosis becomes of the greatest moment How are we to arrive at a correct conclusion?

Diagnosis —It is not the purpose of this paper to deal with the histological aspects of cancer In making a diagnosis of the disease I seldom rely on the microscope In my opinion the clinical features are of the most importance My remarks apply equally to cancer wherever located, deeming the characteristics of the disease the same without regard to locality Without stopping to argue, I will state a few observations that I believe to be facts I am firmly convinced that cancer is a local disease, due to traumatism and irritation, and that heredity plays no part in it I have long since ceased to question for family history If it should exist I would take it only as a coincidence More escape cancer, in my opinion, where family history of the disease exists, than have it under the same circumstances The so called *cachexia* of cancer is misleading In advanced stages of the disease I have sometimes anticipated, but not recognized it The same appearance may be seen under many conditions The same pallor, emaciation, etc , arise from other diseases I do not believe in any *facial* indication of cancer If it exist, it is due to *fear* rather than infection The man under sentence of death

is likely to have it Neither do I believe with Mr Allingham and others that the *odor* of cancer is pathognomonic I am sure that in many cases it is absent The authors are accustomed to give *hæmorrhage*, or a disposition to bleed, as one of the symptoms of cancer It is not at all characteristic I have now under my observation five cases of cancer, none of them have ever lost enough blood to call it a factor in the disease *Pain* is pronounced a prominent symptom, even its *character* is said to be peculiar My record book will show a number of cases that have died with the disease, and pain never existed to any degree *Age* is said to play its part as well Indeed, I have heard some physicians exclude the thought of cancer because "the patient was too young " In my experience I have met with two cases of cancer in patients under twenty years of age, and one under seventeen The majority of such cases observed by me have been under the age of forty five *Touch* is said to indicate much in determining the diagnosis I have often felt for that *gritty* feel, and not found it Hence I am inclined to believe that one or more of the so called symptoms of cancer may be absent If, then, the microscope is not infallible, and many of the physical signs absent, how are we to determine the question? I shall only speak of making a diagnosis when the disease is located in the rectum, and deal with the distinction between malignancy and non malignancy, not caring to enter into a discussion of the different classifications of cancer I recognize the fact that certain conditions are malignant which are not cancerous, yet I deem it quite sufficient for the purpose of elucidation, to speak here only of these two types To attempt anything further than this would bring us into the consideration of many knotty questions We have attempted to show that it is a difficult thing to be certain in a diagnosis of cancer, and I am equally sure that the uncertainty is just as great when we attempt to designate the time that a benign tumor has become malignant After a learned dissertation upon the histological aspects and microscopical evidences of cancer, Billroth says "I acknowledge that it is difficult to distinguish carcinoma from adeno sarcoma and alveolar sarcoma " Therefore, to sum up in the matter of making a diagnosis, I would say that the symptoms to be relied on most are (*a*) The disposition to ulcerate, (*b*) rapid infiltration, (*c*) secondary deposits Certainly these are more trustworthy than many of the so called symptoms, or the revelations of the microscope *No surgeon should be guilty of making a positive diagnosis of cancer, with or without the microscope, until he has learned the clinical facts of the case*

Method of Diagnosing Cancer of the Rectum — Nothing should be taken for granted in examining a patient for rectal disease I have known cancer of the rectum treated for piles, and *vice versa* A history of the disease, with symptoms, should be related by the patient, and not by a second party If cancer be present, some or all of the following symptoms will be mentioned Pain in the back and thighs, lassitude, morning diarrhœa, flatulency, straining at stool, the passage of some blood, mucus, or pus All these may arise from simple ulceration of the gut, but they are, to say the least, suspicious An examination of the rectum should now be made The best position for the patient is upon the left side An inspection of the external parts may reveal much or nothing It is generally stated that cancer frequently begins at the anus, especially the epithelial variety This is not my experience, out of an observation of at least one hundred cases the fewest have had their origin at this site Should this be the part attacked, an external observation, of course, will reveal the fact, if not, then but little evidence will be shown on the outside of the rectum I have had many cases come to me for examination for some supposed trivial rectal trouble, and it revealed the rectum filled with a cancerous growth After a thorough inspection of the external parts, the rectum proper should be examined This should never be neglected I have known patients to be operated on for fistula in ano, the surgeon neglecting to examine the rectum, where a cancer existed Upon more than one occasion I have seen patients who had their *piles* (?) operated on by tying, or injecting a portion of the cancerous mass The best method of examining the rectum is with the finger It should supersede all instruments I have long since discarded the speculum save in the fewest of cases There are but two conditions, to my mind, with which cancer in the rectum could be confounded 1 Simple ulceration with inflammatory deposit 2 Sympathetic ulceration, with consequent stricture Mistakes have often been made I have made them *First* From simple ulceration with inflammatory deposit Simple ulcerations can usually be traced to some definite cause, as dysentery, foreign bodies, etc To the touch the induration has a smooth, continuous feel The ulceration is more or less clear cut, and the discharge is like that from the same kind of ulceration elsewhere If epithelial cancer, a firm growth will be felt involving only the mucous membrane at first, and freely movable If scirrhus, *hard* nodules are found around, and involving, the prostate gland If cancer proper, secondary deposits occur in lumbar glands, groin, liver, etc If simple ulceration, there is no disposition to infiltrate, or of the growth to break down If cancer, the tissue yields to pressure, and infiltration takes place rapidly Hæmorrhage from either condition is hardly a factor, as neither, in my experience, bleed much, except in rare instances, as for instance the uncovering of an artery by degeneration of its coats in cancer The odor, as I have said, is not pathognomonic Some confusion might arise over gland involvement It is true that simple inflammatory action in the rectum may excite the same condition in the adjoining glands, as in the axilla, from mammary irritation, or in the groin, from rectal inflammation The question would naturally arise, "Is an inflamed gland already infected?" I could scarcely admit this as a principle, and yet no one can definitely say just when lymphatic infection takes place

Second From syphilitic deposit with consequent stricture —Whenever ulceration is found in the rectum

it is well to suspect syphilis as a cause I make this rule apply to all stations in life The rich and the virtuous may be the victims as well as the poor and degraded In an article read before the Kentucky State Medical Society several years ago I maintained that syphilis was the *most* frequent cause of stricture of the rectum, and not cancer as stated by some I am equally sure that many cases of syphilitic ulceration of the rectum are mistaken for cancer Anticipating syphilis then in all these cases the history should be traced, and the throat, skin, scalp, shins, etc , carefully examined

Case —Dr B asked me to see a young married woman, with him, who was suffering from a stricture of the rectum The doctor was inclined to believe that the condition was caused by pregnancy, the patient having borne a child about a year before Upon examination a stricture was found, beginning one inch above the sphincter muscle It was impossible to introduce the smallest finger through it A free division was made through the constricted surfaces After this her general health improved and she took on flesh During one of her visits to my office she remarked that she had failed to call my attention to an eruption that had been on her body for some time I looked at it and suspicioned syphilis but referred her to a dermatologist who pronounced it some skin trouble and prescribed an ointment She used this for a long time without effect I then put her on fifteen gr doses of iodide potassi, and at the end of three weeks the eruption had disappeared Arguing from cause and effect I concluded that this woman had syphilis and that this disease was the cause of her stricture—I am certain that the woman was virtuous There is a wide difference to the feel between cancer of the rectum and syphilitic stricture The induration from syphilis is firm but not nodular and does not yield to pressure There is no rapid infiltration of tissue and contiguous parts are scarcely invaded The discharge from syphilitic ulceration is more like that from simple ulceration, and not like the degenerated tissue discharge of cancer The strictures from syphilis are like fibrous bands, while from cancer they are nodular bands which degenerate Hence I imagine that the diagnosis between syphilitic ulceration of the rectum and cancer can be easily made

Treatment —The treatment of cancer of the rectum involves more serious questions than when dealing with cancer of the breast, lip, tongue, and many other favorite sites of the disease Ordinarily, the question of removal of the growth is the first to present In cancer of the rectum it must needs be the last considered It is quite an easy thing to remove the mammary gland, or excise an epitheloma from the lip It is a much more serious thing to remove the rectum Those who advocate the removal of cancer do so for the following reasons

1 It may effect a cure
2 If not, it prolongs life
3 It removes from the sight the offending mass
4 It lessens, or eradicates pain
5 For physiological effect

As I shall take exception to some of these, you will permit me to deal with them separately 1 It may effect a cure That some forms of malignancy have been cured by operation cannot be denied I have known cures to result from the extirpation of epitheliomas, say of the lip, eye lids, etc It has been my fortune to witness many removals of the mammary gland for cancer, it has been my misfortune to know that each time the disease returned Of course other surgeons can report better success than this I have often wondered if the bad success in this particular operation was not due to the method of operating With all due deference to my antiseptic friends, I am not yet convinced but that the plan of Volkman, to remove the whole breast and allow it to heal by *granulation*, is the proper one We often wonder if some of the cancer cells have not been left within the *flaps* Pus here would not be so dreadful an enemy as it is often made out to be Surgeons will often extirpate the breast, and leave untouched the axilla, filled with infected glands, or perform hysterectomy with all the adjoining lymphatics embraced in the disease We have all seen patients submitted to an operation when a clearly defined cachexia existed All this leads me to say that I believe that the operation for cancer is done much too often, many times when there is no earthly chance of doing any good This is wrong, and subjects the profession to criticism May I not say to *just* criticism In collecting data for the successful operations for cancer, statistics are very unreliable As this paper has indicated, perhaps, the disease was not cancer, or the time elapsed was not sufficient to base an opinion on According to the observations of Paget, Sibley, Billroth, Allingham and others, the duration of life in patients with cancer, from the first manifestation of symptoms, is three to four years No one can say how long the disease actually exists before the symptoms are made manifest Suppose then that a surgeon collecting statistics for his successes in these cases affirms a cure before the expiration of this time, or that he had even prolonged life It could be replied that patients had lived as long *without* an operation Some time ago I made a report of two successful operations for cancer of the rectum Since that time one of the patients has died with the disease, although he lived several years after the operation Billroth reports thirty-three cases of the removal of cancer Thirteen died of the operation, aud the remainder all died within two years, most of them of recurrence With such results from such an authority, ought we not to think seriously before doing the operation?

Second —The operation may prolong life To my mind this is an unproven claim I believe rather that surgical interference often hastens a fatal result I know that the great majority hold a different view, but when the disease has become constitutional, the blood corpuscles already changed by the action of the juice, or cancer cell, it is hard to believe that the removal of the growth will stay the disease When lymphatic infection has once taken place, we have yet to discover that power which will prevent its steady march Patients die of the constitutional, not the local effects of cancer

Third —It removes from sight the offending mass This can only apply to growths on the external surface of the body I must confess that the reason carries much weight with it, but would the patient not be a great convert to asthetıcism to ask an operation for this cause only? It would be like painting Camille's cheeks with rouge during her death struggle

Fourth —It lessens or eradicates pain In answer to this I would say that the truth of this depended much upon circumstances If the cancer be located in a part where there was great nerve involvement, it would be likely to involve more than could be removed, and we know that a partial operation would accomplish but little If a cancer absolutely interferes with the use of an organ, say the eye, tongue, etc , I would much prefer to remove the growth because it did so, than because of the pain it excited

Fifth —For physiological effect I must say that I see more plausibility in this reason than in reason third If the patient is convinced that by operation something has been done looking to a cure, then there is surcease of sorrow, at least for a season Yet I do not believe from a surgical standpoint, that the operation should be done either for the third or fifth reason alone

Methods of Operating —There are two plans suggested in a surgical way, for the relief of cancer of the rectum, viz extirpation and colotomy In a word I would say that if an operation for the removal of cancer is decided upon, then a *sweeping* operation should be done I would never remove a *segment* of the rectum If an operation is called for at all it requires the removal of the rectum in its entirety From my own experience and that of others, backed by pathological reasons, I am constrained to say that I do not believe extirpation is warranted in cancer of the rectum My reasons for opposing *colotomy* as a means of relief in many of these cases, were recited in a paper read before the International Congress, and will appear in the published proceedings of that body

FORENSIC RELATIONS OF THE PUERPERAL MENTAL STATE

Read in the Section on Medical Jurisprudence, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887,

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The mental state of the puerperal female has not received the attention its forensic importance merits from lawyers and physicians, owing to the erroneous lay opinion, shared by many members of the medical and legal professions, that pregnancy is now, what it once was in the history of the race, a normal physiological process

Pregnancy, if regarded in this light, stands alone, since no other physiological function presents the pathological phenomena pulmonary, cardiac, gastric, renal, cystic, nervous and other disturbances characteristic of pregnancy Even "labor," that terminates pregnancy, is characterized by the pathological phenomenon "pain" It is illogical to speak of a condition in which *pain* is present as a physiological state Pregnancy unattended by pathological phenomena is the rare exception, so rare that it may well be doubted whether these cases are properly observed, since too little attention is paid to nervous and mental phenomena that do not reach the dignity of paralysis, spasms, contractions, amaurosis, amblyopia, odontalgia, hallucinations, delusions maniacal outbursts or furor That pregnancy at one time was a purely physiological process may be admitted, that it now is no one but a *doctrinaire* will claim after careful examination of the subject

Many causes have contributed to transform this originally physiological state into a pathological one Dr Clevenger most ingeniously points out, for example, that "if we are to believe that for our original sin the pangs of labor at term were increased, and also believe in the disproportionate contraction of pelvic space being an efficient cause of the same difficulties of parturition, the logical inference is inevitable that man's original sin consisted in his getting on his hind legs" To this original sin of assuming the erect position have been added the effect of atrocious modes of clothing, feeding, housing, employing and training one part of the race, which have checked their pelvic development while other forces have augmented the cephalic development From almost the beginning of the race forces have been at work which have decreased woman's usefulness purely as a woman, and made her, man's embryological superior, his actual inferior in the struggle for existence

The Teutonic races, in which woman held a high place, have too often accepted the Latin doctrine, that there was nothing more than woman's caprice in the mental state of the pregnant woman, and have held her strictly responsible for the results of what their public opinion held to be a pathological state As Ben Jonson's plays show, Anglo Saxon popular opinion regarded the pregnant woman as irresponsible for her "longins'," a most natural and just view, since on careful analysis of the mental condition of the pregnant woman it is apparent that this is always affected by more or less morbid perturbations of the (monarchical) cerebral vaso motor centre, secondary *first*, to pelvic fluxionary changes, *second*, to irritative conditions, *third*, to conditions of exhaustion, *fourth*, to pressure neurosis of cardiac, pulmonary, gastric, visceral or peripheral neuric origin These factors of disturbance are always present in the puerperal state I include the period from conception to the termination of early lactation

The circulatory condition of pregnancy, as Cazeaux and others point out, is essentially that of chlorosis, which has been shown to be a trophoneurosis by Dr Hammond The irritative conditions result from the general nervous and circulatory disturbance of which this circulatory neurosis is the expression, and are secondary to local and general inflammatory states, tears, erosions, displacements, etc The conditions of exhaustion originate from the conditions last described, and are often secondary to severe or prolonged labor, lactation, too frequent pregnancies,

poverty and, in the abandoned and seduced, to the nervous agitation resulting from the surroundings

The mental changes consequent in fluxionary pelvic changes are emotional morbidity, depression, abulia varying from simple apathy to extreme loss of will power, or destruction of the logical inhibitions render the pregnant woman subject to undue influence, to morbid suggestions and to pure imperative conceptions Emotional morbidity leads to infanti cide through accidental neglect Apathetic abulia has the same consequence, since it weakens the natural affections Abulia readily leads to infanticide through a paramour's suggestion, by the perusal of child-murder cases, morbid suggestions, cannibalistic sexual furor and pure imperative conceptions Depression, a potent cause of infanticide in non-parturients, much more often leads to it in the pregnant, whose will and natural affections are blunted still more by the puerperal state The mental conditions resulting from the causes mentioned are, as every obstetrician and pregnant woman will admit, peculiarly destructive of the free determination of the will

In all Teutonic countries where popular prejudice has not intervened it is still held that there is no criminal act where the actor at the time of the offense is in a state of unconsciousness or morbid disturbance of the mind that prevents free determination of the will According to this rule the admitted mental consequences of febrile fluxionary changes are amply sufficient to *compel* the State to demonstrate beyond *doubt* that free determination of the will of the pregnant or just delivered woman has not been *impaired* These pelvic fluxionary changes are, as has already been pointed out, not the only influence at work Abulia the result of disturbance of the emotional balance, one of the most common and distressing of mental states, is produced by any or all the conditions mentioned It may vary from slight weakening of the logical inhibitions to states where they are in complete abeyance Women otherwise seemingly healthy complain of this lack of will power or "energy," and find great difficulty in controlling themselves In all conditions in which the will or logical inhibitions are impaired imperative conceptions arise, sometimes of pure type, sometimes suggested by morbid sensations From these conditions also results that capriciousness which characterizes the puerperal state Besides this caprice, emotional morbidity and abulia produced by all the pathological factors mentioned, the local effects of these factors peculiarly modify the mental state

Pressure on the heart, lungs and stomach engenders suspicional mental states, which create delusions of persecution accompanied by ideas of poisoning and impaired appetite (of pulmonary, cardiac, or gastric origin), or of strangling and poisoning (of cardiac and pulmonary origin) Pressure on the peripheral and visceral nerves sets up various types of hyperæsthesia which persist long after the original pressure is removed, and tinge the mental state It hence creates erotic and suspicional mental states Any physician of extensive practice will remember cases varying from slight eroticism just beyond the patient's control to the openly expressed eroticism of puerperal insanity The various "longings" of the pregnant woman arise from imperative conceptions either pure or dependent on perverted sensations, or from reversions to early habits of the race during reproduction So long as these longings were of trifling character their morbid nature would not be disputed, nor considered worthy of thought, but let a pregnant woman kill and eat her husband, or a newly delivered woman, in that peculiar frenzy for blood that arises from perturbed sexual states, kill her child, and these ludicrous longings furnish a psychological key to such actions of great forensic importance Every woman during the pregnant state is, it will be obvious, subject to influences that weaken her will, engender emotional morbidity, render apathetic natural affection, and give rise to ideas of suspicion as well as to perverted sensations and propensities

Legally these mental states predispose to murder, infanticide, nymphomania, arson, sanguinary cruelty, dipsomania and kleptomania, either pure or resulting from a desire for possession dominating a weak will The literature is full of illustrative instances When a well-to do puerperal woman steals the public authorities willingly admit the plea of kleptomania, but when the poor hunted, seduced woman steals she is too often treated as a criminal If a married woman kill her newborn child no jury will convict her Let a seduced and abandoned girl do the same and a public example is demanded (*pour encourager les autres*) Yet in this last case the power of self-control is much more weakened, not only from the puerperal state but from other moral effects engendered by seduction, desertion and dread of exposure This is arrant injustice, that can only be defended on the tyrant's plea of necessity for the protection of society, a plea, as history shows, based on ignorant prejudice Severe penalties never decreased infanticide, since the seduced infanticide never could appreciate the bearing of these penalties This was well illustrated by Goethe, who never drew a truer or more pathetic picture than that of Margaret about to be executed for an infanticide springing from the perturbed mental state clearly evident in her last interview with Faust

In conditions of doubt justice leans to the presumption of innocence From what has already been said it must be evident that the mental state of the puerperal woman is a dubious one In Illinois, it would be sufficient to make the claim that the mental condition of the puerperal woman was unsound, and the burden of proof would immediately fall on the State, in obedience to the old legal presumption of innocence in every man In Indiana and New Hampshire the same just doctrine is held Mental states are matters of fact, not ideal creations of law It is sad to say that in the majority of our States the burden of proof falls on the prisoner in all cases in which insanity is a defense, and what insanity is, is determined by legal tests set up decades ago under pressure from English precedents Barbarous as these legal doctrines are, they are held in

Alabama,	California,
Delaware,	Kansas,

Maine,	Georgia,
Massachusetts,	Michigan,
Missouri,	Mississippi,
Minnesota,	Nebraska,
New York,	New Jersey,
Ohio,	North Carolina,
Pennsylvania,	Tennessee,
Texas,	Kentucky,

Federal Courts

These cruel absurdities have their natural result Judges, unable to rid themselves of legal superstitions, resort to subterfuges to avoid enforcing the alleged law in cases in which crime was the offspring of insanity not covered by the legal definitions In the infanticide case of "The People vs Kate Harvey" expert testimony was not introduced until after the jury had convicted the prisoner, but the judge allowed the mental condition produced by the puerperal state to mitigate the sentence The absurdity of such procedures is well summed up by Judge Doe, of New Hampshire "If tests of insanity are matters of law, the practice of allowing experts to testify what they are should be discontinued If they are matters of fact the judge should not longer testify without being sworn as a witness and showing himself qualified to testify as an expert"

In dealing with any forensic question the physician's first duty is to determine whether such a thing is a fact, not whether it might under certain supposable conditions have a bad effect on society Once ascertained to be a fact, it is his duty to declare it such In this spirit I have striven to prove that in crimes committed during the puerperal state the burden of proof lies on the State, since the alleged criminal suffers from a pathological state predisposing to violations of major and minor morality The law, in its assumption that every one is innocent, regards crime as an unusual state, and this presumption of innocence is strengthened if the state of the alleged criminal predisposes to unwilling violations of morality

SUBPERIOSTEAL RESECTION OF A RIB FOR EMPYEMA IN CHILDREN, RECOVERY

Read before the Chicago Medical Society, October 17, 1887

BY ALBERT B STRONG, M D,
OF CHICAGO ILL

I have within the past two years made subperiosteal resection of a segment of a rib for empyema in two young persons, one a boy of 6 and the other a youth of 17 years of age The results have been so satisfactory that I desire to place the cases on record at the present time, particularly so, since able authority has recently condemned the operation in children[1]

Case 1 —In May, 1886, I saw in consultation with Dr Charles Venn, of this city, a boy 6 years of age The father, mother and other children of the family were perfect pictures of health The boy was large for his age, and up to his present illness had always enjoyed the best of health Four weeks prior he began to cough, and eight or nine days later evidences of an effusion into the right pleural cavity were manifest In spite of appropriate constitutional and local treatment, the effusion increased, and when I saw him the chest cavity was completely filled The boy was much emaciated with continued fever and night sweats

A hypodermic needle thrust into the chest just above the eighth rib in the axillary line, revealed the presence of pus Under ether the eighth rib was exposed through a parallel incision two inches in length The periosteum, midway between the upper and lower border of the rib, was split in a longitudinal direction, the distance of an inch By means of a blunt hook the periosteum and intercostal vessels were easily peeled off from the posterior surface of the rib, and three fourths of an inch was cut away with bone nippers This was done without wounding the intercostal vessels or pleura Next the internal layer of the periosteum was split to the same extent, and parallel to the external layer The pleura was opened when two quarts of laudable pus were evacuated The chest cavity was immediately washed out with a warm saturated solution of boracic acid, and a large rubber drainage tube retained in position

The subsequent history was uneventful He began to improve at once The chest cavity was daily washed out with simple warm water A wad of oakum was placed over the wound The tube was kept in place six weeks, when the lung was entirely expanded and the wound healed completely Now, sixteen months after the operation, the boy is perfectly well The right chest is normal like its fellow, in shape and function There is but a small scar at the seat of operation, and the rib has perfectly reformed in direction and shape

Case 2 —Norwegian boy, 17 years of age, always delicate, very thin and poorly nourished, six feet tall, pale and anemic Father, brother and one sister, died of consumption Mother alive and doing well Patient was first taken sick about March 10, 1887 The symptoms and signs indicated pleural pneumonia of the lower lobe of the right lung In a few days he was convalescent

On March 24, he had a relapse, and the right chest slowly and intermittingly filled with effusion He had night sweats, diarrhœa and cough, and a temperature of 102° to 104° F On April 24, about five weeks from the commencement of the effusion, empyema being diagnosed by the hypodermic syringe, with the assistance of Dr Venn, I removed subperiosteal, one and one-half inches of the 9th rib in the axillary line Four quarts of laudable pus escaped At the last about four ounces of clear serum passed out Immediately washed out the chest cavity with a hot solution of boracic acid, introduced two large parallel rubber tubes with a drainage diameter of three eighths of an inch each These were held in position by a rubber shield and elastic bandage around the chest The pleura was felt to be about three-fourths of an inch thick Dur-

[1] See an article by Dr Garnett of Washington on The Surgical Treatment of Suppurative Pleurisy in Children published in THE JOURNAL, Sept. 17 1887

ing the next few days there were washed out large masses of lymph Hot water injections of two quarts at a time were used, night and morning A wad of oakum was kept over the opening and changed often The diarrhœa, sweating and cough began immediately to abate The temperature in three days dropped to normal On the first day of May, eight days after the operation, the tubes were crowded out All the unfavorable symptoms had disappeared, he was eating and sleeping well The opening on the inside was closed, as I then thought by the expansion of the lungs, I subsequently learned it was closed by the arching of the diaphragm The tube was left out five days, when the temperature began to ascend, and soon reached 104 There was a return of the sweating, diarrhœa and cough Nothing had escaped from the wound in the meantime I then reopened the wound and washed out about five ounces of stinking pus and débris, passed a large Van Buren urethral sound into the chest, and ascertained that the lung was compressed into a small wad against the vertebral column It had not expanded a particle I felt the apex of the sound in the chest above the clavicle Reintroduced longer, fenestrated drainage tubes, three inches in length From this time on his convalescence was uninterrupted Temperature quickly became normal and did not again rise He soon began to go out of doors and improved rapidly On June 12, three weeks after the tubes were reintroduced, my notes read Boy has gained ten pounds, out of doors most all day Eats enormously and digests it well No cough and but little discharge The sound in the chest shows the lung has not expanded Put in drainage tubes without fenestra, since granulations had crowded into the former tubes so as to nearly occlude them Sent the boy to a farm near Whitewater, Wisconsin, with instructions to keep tubes in position, and syringe out the cavity once a day with warm water that had been boiled Ten weeks later, on August 25, he returned looking altogether different Was twenty pounds heavier than when first taken sick, and expressed himself as never feeling better in his life The tubes had remained in place until a few days before, when they had been crowded out and could not be reintroduced Physical examination showed the lung expanded with good motion of the chest and vesicular murmur throughout In a few days more the opening entirely healed and the boy left for Norway, perfectly recovered, six months from the commencement of his illness and four months wearing the tube

It is only within a few years that surgeons have been bold enough to make a section of a rib for empyema It is, perhaps, but natural that the operation should be condemned by those who have always used the trocar or incision To oppose the operation on purely theoretical grounds and conclude that it is a grave and serious operation, is, I believe, contrary to the facts in the published cases

In the article alluded to in the commencement of the paper, we find a table by a London writer of thirty-four cases of empyema, treated surgically, occurring in children of from 1 to 10 years of age Of the number seventeen recovered after a short section of one rib had been made The average time of recovery was seven weeks

Dr Garnett reasons that had these cases been treated with the trocar and drainage tube they would in all probability have recovered equally as well Here is what he says against exsection "When we consider the fact that the bony fabric of the chest is still in a condition of progressive development, the rapid and excessive deposit of callus following the solution of continuity of a rib protruding into the cavity of the chest, irritating the lung, the inevitable disparity and loss of symmetry in expansion of the two sides of the thorax, the growing condition of the child, which necessarily adapts itself to the physical results of the traumatic interference, establishing often a permanent deformity, associated at times with more or less spondylitis, and greatly restricted respiratory capacity of the chest, the pouch of periosteum from which the excised piece of rib has been dissected, the protracted healing and long-continued dressing of the open wound augmenting the chances of septicæmia, and exhausting the vital energies and recuperative resources of the little sufferer We should hesitate before resorting to so grave a surgical procedure when a more simple and conservative one can be safely and successfully practiced "

Such conclusions, I think, should not go unchallenged One does not find them from a careful study of these cases The simple questions that I should like to invite your discussion upon is Is subperiosteal cutting away a short segment of one rib with modern surgical treatment, liable to be followed by such grave consequences as the writer referred to would have us to believe? Free drainage in abscess cavities is the imperative rule at the present day This is best obtained by making a patulous opening larger than is possible to make between the ribs In my first case the rib has completely reformed In the second it is growing again In neither case did callus injure the lung In both cases lung expansion and chest motion and shape are perfect Septicæmia present in both cases, was quickly cut short by free irrigation, only possible through a large opening

I would therefore conclude that in these two cases, section of the rib at least added nothing to the gravity of either case

MEDICAL PROGRESS.

PRESYSTOLIC HEART MURMURS —At the meeting of the Medical Society of London, on November 7, DR J S BRISTOWE read a paper on this subject He divided mitral obstruction murmurs into three varieties, namely 1, one beginning from the second sound and ceasing in the course of the diastolic period, 2, one occurring isolated in the diastolic period, and 3, the murmur (to which the names presystolic and auricular systolic are indifferently applied) lying along the diastole and running up to the

first sound He likened the sound of the last of these (which is usually louder and rougher than the others) to that of the trilled R, and the sound of the two to that of an untrilled R, but observed that, although they sufficiently often occurred, separately to merit individual description, they not infrequently coalesced, in which case the whole of the interval between the second and the first sounds was occupied by a more or less continuous roar, the earlier portions of the sound often then becoming as loud and rough as the later part Although he admitted that the presystolic portion was usually louder, owing to the fact that it occurred while the auricle was contracting on its contents, and propelling them forcibly into the ventricle, he held that the rate of blood flow from the auricle into the ventricle, even when the auricle was quiescent, was amply sufficient to cause the coarse vibrations giving rise to a trill, and he argued that that was the main reason why these murmurs were heard over so small an area, and that the sound was consonantal in character and not musical He discussed the questions of the relative feebleness of the second sound due to the aortic valves, of the frequent reduplication of the second sound, and of the cause of the apex thrill, and expressed concurrence in the views generally taught He argued that the presystolic murmur could not be a systolic murmur, as Dr Barclay, Dr Dickinson and others maintained, because 1 The assumption that there is a noiseless period of ventricular contraction prior to the closure of the mitral valve is not in accordance with physiological facts 2 If the murmur occurred during the early systole, it ought to be coincident with the apex beat and the pulse, whereas it preceded them 3 If this explanation of the presystolic murmur be correct, there ought also to be at the same time a presystolic aortic murmur And, lastly, the presystolic murmurs are of the same quality as the earlier murmurs, which were undoubtedly diastolic, and are but carried back into the auricle as a regurgitant murmur necessarily must be In the last place he drew attention to hæmic murmurs existing in the pulmonic area, and showed that they so far resembled obstructive mitral murmurs that they were rough, and that they tended to occupy the whole period of systole and to run up to the second sound —Dr Dickinson, in paying a tribute to the ability of the author of the paper, expressed his regret at having to join issue with him on the subject of these murmurs He alluded to the means of differentiating an aortic regurgitant from a diastolic murmur by change of position —Dr Sansom went very fully into his reasons for differing from the previous speaker, and rallying to the ideas of Dr Bristowe and Professor Gairdner, he maintained that the snap which terminated the presystolic murmur was not due to closure of the mitral valves, but suggested that it was due to the tricuspids —Dr Burney Yeo said he had at one time collected a large number of heart cases, sixty in all, in six of which a well defined presystolic murmur was present He mentioned that in describing the character and relations of this murmur it was necessary to describe the action of the heart at the time of observation, whether fast or slow —Dr Broadbent said he endorsed every word of Dr Bristowe's paper He urged that Dr Dickinson's assertions that the snap terminated the ventricular systole and concluded the diastolic murmur were irreconcilable He thought Dr Sansom's idea of the cause of the snap was probably not the correct one —Dr Ord contented himself with approving the ideas expressed by the preceding speaker —Sir Dyce Duckworth, expressed a feeling of pity for the small minority who were opposed to generally received views on the subject He regretted that the question should have once more been brought up, and trusted it would now be allowed to rest in peace—Dr Kingston Fowler quoted the case of a lad who had a systolic thrill and murmur over the tricuspid area, due probably to tricuspid regurgitation as well as a presystolic murmur and thrill, to be felt alternately Dr Stephen Mackenzie concurred in Dr Bristowe's views —*British Medical Journal*, Nov 12, 1887

Surgical Tuberculosis —40 – Tuberculous affections are very frequently multiple, because *a* When the virus first enters the system it is deposited in different places The multiplicity of the foci in spina ventosa is well known Less consideration has hitherto been given to the acute invasion of tuberculosis with multiple foci developing quickly, one after another, in the different organs and tissues of hitherto healthy persons, in children and adults, and even in old people The persons so attacked often succumb, but they may be completely cured, and remain healthy afterwards

b Or the tuberculosis may become multiple because there are different infections from without, at different times, and independent of one another A patient suffers in youth from tuberculosis of the lymph glands, is affected by tumor albus or an arthrocace towards puberty, and dies in his thirtieth year of pulmonary tuberculosis This is a very usual occurrence, and it cannot appear strange, since the susceptibility to the tuberculous virus is not weakened by the tuberculous disease, and in the majority of cases the individual has a heightened susceptibility for the virus

41 —But there is no ground, in cases of multiple focal affection, for considering the younger foci as having arisen secondarily from the older foci by autoinfection, and for considering tuberculous joint and bone diseases as of a metastatic character, as has been done a good deal of late Thus far this metastatic character has been proved only for the localization of acute miliary tuberculosis (Concerning autoinfection see 37, *b and d*)

42 The operative removal of a tuberculous focus will of course render impossible the originating of an acute miliary tuberculosis, or the farther infection of lymph glands from this point, but it does not preclude the later origination of equally important affections in other places, and does not mitigate the danger of a later pulmonary tuberculosis A person that, for example, in youth has undergone an amputation of the thigh on account of a tuberculous knee-joint affection, remains endangered for ten or fifteen

years, or at least there is something to apprehend, because the susceptibility to the tuberculous virus is shown in him, and possibly, though not necessarily, still exists

43 Local recurrence after operations in tuberculous affections, and the fact that wounds again become fungous, find their grounds not in the constitution of the patient, in the tuberculous or scrofulous diathesis, as is generally supposed, they are much oftener due exclusively to the fact that the operation was not clean, and that tuberculous tissue was left somewhere, which afterwards again grows out and infects the healthy granulations tissue and cicatrix

After amputations in completely healthy parts, even in persons with advanced tuberculosis of the lungs, recurrence at the stump (fungosities of the amputation wound) do not occur On the contrary, the dry tissues of the emaciated limbs easily heal in such cases by first intention It is a matter of consideration, therefore, that when an amputation is done no fistula should be left in the flaps

Nor have I ever seen in a scrofulous child or in a tuberculous one, even with manifest pulmonary phthisis, the wounds becoming fungous after an amputation on account of trauma or after the extirpation of a lipoma, etc , or in case of a wound, or an extensive laceration of the soft parts that required months to heal, or in case of a compound fracture And I would ask whether any one has ever seen such a thing The report of such a case, observed and thoroughly examined, would be of considerable importance

44 In spite of all this the greater number of all tuberculous joint and bone affections is certainly to be referred to traumatic causes, not necessarily to severe wounds, but to slight trauma, contusions, distortions, that would be followed by no such result in persons who are not susceptible to the tuberculous virus That sprains of the hand and foot frequently lead to tuberculous joint and bone affections (caries) cannot be doubted But even spondylitis usually develops in children after such cases, or after a push, etc It must be supposed that after a severe trauma (subcutaneous fracture, large wound, etc) the energy of the reactive and reparative tissue-proliferation is so considerable that the development of the tuberculous germ is not allowed—an hypothesis for the admission of which the conduct of the lower organisms furnishes many analogies On the contrary, a slight trauma easily furnishes a favorable soil for the development of the tubercle bacillus — *Langenbeck's Archiv*, Bd 33, Hft 1

(*To be concluded*)

AMPUTATIONS FOR DIABETIC GANGRENE —KONIG summarizes the practice of German surgeons as follows In diabetics the tendency to inflammatory and necrotic inflammatory process is greater than in healthy persons Roser and others have pointed out that necrotic processes occur more frequently even in apparently strong diabetics, and those without thirst and polyuria In all cases in which spontaneous or even post-traumatic phlegmonous and gangrenous processes develop, the urine should be examined for sugar This rule does not overlook the fact recognized by Redard, that in such conditions sugar and albumin may be present transitorily According to Roser inflammation and necrosis in diabetics must first be treated constitutionally The question of such larger operations on diabetics, as amputation for gangrène is a difficult one for the surgeon, and the general plan has been to avoid them as long as symptoms of diabetes continue General antidiabetic and local antiseptic treatment suffices in some, but in severe cases the trouble often ends fatally

In such a case last year Konig concluded to risk amputation, and saved a gouty old man (of 70 years) with gangrene of the leg This began at the little toe, and, extending to the ankle, led to suppuration, increase of sugar in urine (from 2 to 4 per cent), loss of appetite and flesh, coma, etc As the patient was in an exhausted condition constriction was employed Rapid amputation at the middle of the leg was done Very extensive arterio sclerosis with calcification of numerous small arteries was found By the next day sugar had disappeared from the urine, and the apathetic condition had passed off The wound remained aseptic, appetite returned Diet was continued and the patient was discharged in eight weeks with no sugar in his urine Later, however, despite antidiabetic regimen, sugar was again found in the urine

A second case was that of a well nourished brewer, æt 40 years, who had phlebitis of left leg two years previously, and thirst and loss of flesh for nine months Gradual development of gangrene of left big toe, with consequent phlegmons of the foot, loss of appetite, continuous hiccough, low fever The urine contained 4 per cent sugar and a trace of albumin Despite careful general local treatment the patient grew worse, although the sugar diminished to 2 and $\frac{1}{5}$ per cent Operation as in the previous case In four days the sugar had disappeared from the urine, and other morbid symptoms were no longer present Discharged cured in six weeks Here also the same arterial changes were found as before Six months later the urine contained no sugar

Konig concludes from these cases that in diabetic gangrene where, despite antidiabetic and local antiseptic treatment, the general and local symptoms do not improve, and further waiting involves danger to the patient, we should try to save life by a radical operation—usually an amputation—executed with the most scrupulous attention to antisepsis — *Centralbl f Chirgie*, No 13, 1887 —*Annals of Surgery*, August, 1887

RETENTION OF URINE PRECEDING APOPLECTIC ATTACKS —MR W GEM reports the following cases

W S , aged 60, laborer, of temperate habits Has had rheumatic gout for some years Was admitted into the infirmary in 1882, and has been readmitted off and on ever since for rheumatic gout Heart sounds normal, but has atheromatous arteries Has had iritis, but no other defect of vision Urine nor-

mal Suffered from retention for six days, after which he had a severe apoplectic attack, with consequent left hemiplegia

C E, aged 40, carman Intemperate Had rheumatism for some time Was admitted in 1882, and has been readmitted off and on ever since for rheumatism and cardiac valvular disease Has albumen in urine, but sight is good Had retention for seven days, followed by an apoplectic attack and right hemiplegia

W C, aged 57, laborer Intemperate Had rheumatic gout for some years Admitted for such in 1885 Heart sounds normal Double optic neuritis, but urine normal Had retention for ten days, after which he had a severe apoplectic attack and complete left hemiplegia

G W, aged 49, baker Habits not known Admitted for melancholia, and was transferred to an asylum Being discharged some time after on trial, he was readmitted for subacute rheumatism Heart sounds normal Sight not ascertained (too restless) Urine normal Had retention for four days, and and then had an apoplectic attack, with subsequent right hemiplegia

All the above cases were treated as follows Perfect rest, blistering the nape of the neck, croton oil, and warmth to feet, *plus* the following drugs bromide of potassium, decoction of aloes, and compound spirits of ammonia, followed up afterwards with the iodides The very best results were obtained by this treatment, with the exception of the last case, which is recent

It is with reticence I bring forward the above cases, as such may have been discussed in the ephemeral literature of the day The drugs above mentioned need no comment from me, as their actions are too evident, but I may say that I have had the most favorable consequences from them in two cases I anticipated, where retention had been complete for two or three days The query of course arises, Would such cases have gone on to an apoplectic attack? I have every reason to suspect such an unfortunate accident, as the one patient had an intense localized headache, with retinal hæmorrhages, the other not so well marked The first one was readmitted after some time with a recent hemiplegia, showing that such an untoward event had previously been warded off—*Lancet*, Nov 19, 1887

Principles of Plastic Surgery—In an article on plastic surgery Mr C B Keetley says It will be granted that all parts of the body are susceptible to septic inoculation, therefore one of the first rules of plastic surgery should be *Thoroughly disinfect the parts to be operated on, the hands of surgeon, assistant and nurse, the instruments, sponges, ligatures, sutures and dressings*

As a preliminary to the use of such germicides as sublimate and carbolic acid, a prolonged washing and scrubbing with the liquid potash soap of Dr Duncan, of St Petersburg, is very useful This soap has two excellent properties, (1) it is an extraordinarily powerful solvent of dirt, (2) it is itself instantly soluble in cold hard water or antiseptic lotions so that it may be said to promptly "do its business and go about its business" But, bearing in mind that in plastic surgery, one almost always desires union by the first intention, and that irritants such as the stronger germicides are not favorable to that, *an ideal plastic operation should be aseptic rather than antiseptic* For this reason I generally, while keeping the instruments in a tray of carbolic, dip them into a basin of recently boiled, not boiling water[1] before touching the patient with them But when they are even temporarily laid down again, it should be either into the tray or upon a damp carbolized towel, disposed around or near the site of the operation The same recently boiled, not boiling, water, is used as a douche and for the sponges Some persons would prefer boracic lotion I greatly doubt whether it has, for these purposes, any advantage over the boiled water If the operation were to occupy days instead of say half an hour, it would be a different matter

With regard to ligatures, they should scarcely ever be used in a plastic operation Temporary pressure with sponge or forceps almost always suffices to check hæmorrhage The boiled water used at a temperature of about 120° will assist Hare lip pins or silver sutures can be often arranged to not only adjust the parts but also at the same time to control an obstinate vessel The objections are manifest to a number of catgut knots in a wound where perfect antisepsis is impossible

I believe it may be laid down as an axiom applicable to surgery in general that *even with the aid of antiseptics, the difficulty of obtaining union in a wound without suppuration increases geometrically with the length of time a foreign body is left unabsorbed in the wound* I may not be expressing myself properly, but I mean, for instance, that when in a simple osteotomy, even though it be done antiseptically, a large splinter of bone be chipped off, and left *in situ*, suppuration is ten times more likely than if no such splinter had been made Very probably it is the case that, even with carefully applied antiseptics, a few germs find their way alive into the wound, but their chance of surviving and multiplying depends mainly upon their finding or not finding some dead or half dead organic nidus to receive them It is, therefore, particularly desirable to keep catgut out of wounds when complete antisepsis is not only difficult but often impossible

As a prophylactic against tedious and troublesome hæmorrhage, the preference of scissors to the knife for the division of all structures except occasionally the skin itself, is to be strongly urged With regard to the skin, in dividing it the precision attainable with a sharp scalpel recommends the latter—*Annals of Surgery*, August, 1887

Hysterical Coma and the Treatment of Hysteria—Dr Wallace A Briggs, of Sacramento, after recording an interesting case, concludes as follows The treatment should be directed to (1)

[1] A handy way in which I think aseptic as distinguished from antiseptic water could be quickly produced, would be by adding iodide of potassium to sublimate lotion until all the mercury was precipitated, but I have never tried this plan

the removal of all sources of eccentric irritation and of emotional disturbance, (2) the stimulation and building-up of the will and higher intellectual faculties, (3) the restoration of the general health and the improvement of the nutrition of the nerve tissues

1 In children, in women, and perhaps no less in men also, especially in those of a nervous temperament, we constantly observe a notable increase of irritability of the nervous centres, in consequence of indigestion This irritability finds expression quite as often in peevishness, in ill-temper, in cynicism, in hypochondriasis, in melancholia, and in pessimistic views in general, as in neuralgia, in perversions of sensibility, and in anomalous and uncontrollable muscular movements When dependent on indigestion, this irritability is the product in part of reflex action resulting from local irritation of the gastro-intestinal tract, and, in part, probably in greater degree, of malnutrition of the nerve tissues, as well as of their poisoning by the products of decomposition

Judging no less from experience than from analogy, I am convinced that the exciting, if not the predisposing, cause of hysterical outbreaks, emanates not infrequently from the digestive organs Regulation of the digestive functions, then, is of the first importance, not only in the removal of eccentric irritation, but also in the prevention of poisoning and the promotion of nutrition of the nerve tissues Displacements and congestive and inflammatory conditions of either the uterus or the ovaries are occasional sources of peripheral irritation, and should be corrected Emotional disturbance in ill regulated nervous systems is often the immediate exciting cause of an hysterical attack, and, whether of sorrow, of chagrin, or of immoderate laughter, should be studiously avoided

2 The psychical and nervous inco-ordinations of hysteria demand strict discipline of the intellect and will The dominance of the will must be asserted until self-control becomes a habit If spontaneous control is impossible, the will power may be effectually stimulated by the interrupted current Its virtue consists chiefly in in its profound physical as well as moral impression It should be rapidly raised to the *effective* strength, and be re-inforced by all the moral influences that circumstances suggest.

3 Morbid conditions associated with hysteria should receive appropriate treatment Cachæmia, which in its various forms, seems not infrequently to sustain a causative relation to the finer organic lesions of the nervous system, demands particular attention Iron, lime, soda and potash salts, especially in the form of phosphates or hypophosphites, strychnia, quinia, arsenic and cod-liver oil, judiciously alternated or combined, are our most trustworthy reconstructive tonics, but they must not be prescribed to the neglect of a proper dietary Strict hygienic discipline should be maintained all along the line—intellectual, moral, physical —*Sacramento Medical Times*, December, 1887

CREOLIN VERSUS CARBOLIC ACID AS A DISINFECTANT AND ANTISEPTIC —DR E VON ESMARCH, assistant in the Royal Hygienic Institute of Berlin, has made a series of experiments with creolin, a new disinfectant, which has been highly spoken of by Professor Frohner, of the new Veterinary School of Berlin Dr von Esmarch made a number of comparative observations with carbolic acid on the disinfecting, deodorising and antiseptic properties of creolin Amongst other observations, he noted the effects of the two substances on fluids containing cholera, typhus, and anthrax bacilli As a rule, creolin appeared to be much the more active Similarly the offensive smell of various putrefying liquids was controlled much more readily by creolin than by carbolic acid Creolin soap, too, showed itself more active as a disinfectant than corrosive sublimate soap —*Lancet*, October 15, 1887

CONTINUOUS IRRIGATION WITH HOT WATER IN SEPSIS AFTER LAPAROTOMY —DR HAGGARD, of Nashville, reports a case in which, after partial removal of a fibroid tumor of the uterus, necrosis of the remainder and sepsis occurred, treated by continuous irrigation for a week with water at a temperature of 105°, and the free use of tonics Recovery and cessation of all previous symptoms ensued He adds the report of a case of laparotomy for cyst of the broad ligament, in which sepsis occurred, owing to the presence of necrotic tissue, whose removal was impossible in the exhausted condition of the patient

Constant irrigation with hot water for twelve days resulted in maintaining the elimination of noxious material, and the patient recovered In both cases the usual methods of drainage failed —*Southern Practitioner*, November, 1887

TREATMENT OF THE THIRD STAGE OF LABOR — FREUND, of Strassburg, gives his conclusions regarding this subject as follows In normal cases a judicious combination of the expectant and active method in treating the placenta and membranes is best In removing the placenta the accoucheur should wait until the first signs of spontaneous expulsion appear In cases where the placenta must be removed at once, Credé's method of expulsion is the best Freund has observed, in normal cases, that the uterus rises toward the umbilicus when it expels the child He imitates, with one or both hands, this action in securing the expulsion of the placenta by gently pushing the uterus upward, and compressing it at the same time —*Deutsche medicinische Wochenschrift*, October 27, 1887

NERVE SUTURE —MR CROFT reports in the *British Medical Journal*, of October 8, a case in which the tibial and femoral arteries and the posterior tibial nerve were cut, the nerve being severed The ends of the nerve were retracted an inch and a half They were carefully sutured with very fine silk, and the wound dressed antiseptically In twenty four hours sensation was established all over the foot, though modified in character on the sole In five weeks the leg was entirely well, and the patient, a boy, had perfect use of and sensation in the foot and leg

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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MEDICAL LEGISLATION

The season of the year is near at hand when a large number of the State legislative bodies will be in session for the making or revision of laws in their respective States, and it is probable that the usual number of bills will be introduced proposing to regulate either the education or practice of the profession, or the sanitary interests of the people, or all combined During the last ten or twelve years there has been an increasing disposition shown by the Legislatures of many of our States to legislate on these important interests This disposition has originated in part from a better appreciation of the value and necessity of sanitary measures for the removal of the causes of many preventable diseases by the people, and in part from the efforts of the profession to establish and enforce a higher standard of education for those proposing to practice medicine, as the best mode of checking the tendency to overcrowd the profession, and at the same time secure for the sick more skilful attendants That these several objects are of sufficient general interest, and so directly affect the welfare of all classes of people, as to merit the careful attention of the legislative bodies, will be admitted by all enlightened citizens

And yet the history of past legislation regarding them, from the first organization of our State legislative bodies to the present time, presents a diversity and instability of character hardly equalled in relation to any other public interest While there is going on a free and frequent migration of physicians from one State to another, and large numbers of students annually graduating in the medical colleges in one State and locating for practice in other States, each State has its own laws relating to both medical education and practice, each differs in some respects from all the others Yet it would be difficult to find among them all a single example of medical legislation founded on correct principles and sufficiently complete in the details to be efficient in securing for the people of the State a sufficient number of thoroughly educated medical men, and at the same time in protecting the sick from the depredations and impositions of ignorant and unprincipled impostors

If these efforts to procure legislation for regulating medical education and practice in the several States are to continue, the first and most important object to be accomplished is the framing of a bill based on sound principles of political economy, brief and simple in its details, yet sufficiently comprehensive to establish and secure the practical enforcement of a fair standard of general education before the commencement of medical studies, and a reasonably thorough knowledge of all the recognized branches of medicine, including clinical and practical laboratory work, before receiving a license to practice, by an able committee, appointed by the American Medical Association And if, after full consideration by that National representative organization of the whole profession, its provisions were approved by a practically unanimous vote, efficient measures should be taken to have its provisions urged upon the attention of every State Legislature whenever medical legislation is attempted, until such legislation in all the States becomes both efficient and practically harmonious Some disposition to act in this direction has already been manifested in connection with the National medical organization At the annual meeting of the American Medical Association in New Orleans, 1885, the subject of legislation for the regulation of medical education and practice was actively discussed in the Section of State Medicine in connection with the draft of a bill presented by Dr John B Roberts, of Philadelphia A resolution was adopted by that Section, asking the Association to direct the Permanent Secretary to communicate a copy of said bill to each of the State Medical Societies and solicit their action thereon The movement failed to elicit any general attention or approval by the State Societies, and two years later, at the annual meeting of the Association in Chicago, a discussion of the subject was resumed in the Section of State Medicine which resulted in the adoption of the following resolution, offered by Dr P H Millard, of Stillwater, Minnesota

"*Resolved*, That a committee of five be appointed by the Chairman of the Section, to frame a *bill* for

recommendation to the several States for regulating the practice of medicine "

In obedience to this resolution the Chairman of the Section, Dr Geo H Rohé, of Baltimore, announced the committee as follows Dr P H Millard, Stillwater, Minnesota, Dr H A Johnson, Chicago, Illinois, Dr R H Plummer, San Francisco, California, Dr C W Dulles, Philadelphia, Pennsylvania, Dr C B Belt, Boston, Massachusetts

The committee was well selected, and we trust that it will be able to report, at the coming meeting of the Association in Cincinnati, a bill or form of law much better adapted to accomplish the objects desired than any other heretofore proposed or adopted The committee should be encouraged and aided, in its important work, by a candid discussion of the more important topics and interests involved, by the medical press

THE ACTION OF DRUGS ON THE KIDNEY

The action of drugs on the circulation and secretion of the kidney is a subject as interesting as it is comparatively little known A brief and valuable contribution to the subject was made by DR C D F PHILLIPS, of London, to the Ninth International Medical Congress, and published in the *Lancet*, of November 12, 1887 The experiments were made on cats and dogs The results arrived at may be summarized as follows

The effects of caffeine citrate, in half-grain doses The *blood-pressure* is first lowered, and is then raised, both effects being of short duration and slight, especially the rise of pressure The *heart* showed first a diminution in the force of the beats, followed by a slowing, with beats of markedly increased force On the *kidney* caffeine causes at first contraction, lasting two or three minutes, and accompanied by diminution or even arrest of secretion, this is followed by expansion, that lasts, after a one-grain dose, more than half an hour sometimes, the flow of urine being at the same time trebled That the effects on the kidney cannot be due to the changes in the general blood pressure, is shown by the fact that they do not occur simultaneously

The effects on the general blood-pressure are slight, and last only a few seconds, the effects on the kidneys being measured by minutes

Ulexine, the new alkaloid obtained from the seeds of the common gorse, acts in a similar way to caffeine The objection to it is that its diuretic action is maintained only by doses that would either kill or produce violent convulsions Like caffeine, it produces first a constriction and then an expansion of the renal vessels, with diuresis It differs from caffeine 1 In being more powerful 2 Its effects are more transitory 3 Repeated doses of caffeine injected rapidly cause only contraction of the kidney, not followed by expansion, a similar excess of ulexine causes expansion only, without contraction Other substances that cause expansion of the kidney are dextrose urea, acetate and chloride of sodium, and probably all constituents of the urine. More numerous are the drugs causing constriction of the kidney Digitalin causes contraction in doses of $\frac{1}{40}$ gr , which persists for as much as half an hour While it is difficult to say if digitalis is a true diuretic, or only exerts its effects through the heart, the urine is not diminished during the contraction of the kidney, as is the case with caffeine, but it is generally increased The explanation probably lies in the effect on the general blood-pressure, digitalin raising and caffeine lowering it

While spartein acts similarly to digitalin on the heart, general blood-pressure, and renal vessels, it causes a great diminution of urine, and its so called diuretic effect, in disease, is due to improvement of the general circulation The chief action of strophanthin and apocynein is on the heart muscle, and they produce little or no effect on the peripheral vessels Turpentine, adonidin and barium chloride produce marked renal contraction without diuresis

From the above it is seen that "reputed diuretics more commonly produce contraction of the renal vessels than expansion Further, that expansion is either slight, as by acetate of soda, or, if large, as by citrate of caffeine, it is only produced by small and initial doses The powerful action of alexin on the respiratory mechanism is a great drawback to its use, one-sixth of a grain was used in our experiments, but one-twelfth of a grain would completely arrest respiration Then, again, such drugs as produce contraction of the kidney cannot be bracketed together, since, though they all have the same effect on blood-pressure, digitalin alone has an obviously diuretic effect " The flow of urine is not so much dependent on blood-pressure as on the rate of the blood flow in the renal vessels "It is necessary also to remember that although such drugs as strophanthin produce a great increase in the force of the cardiac beats, yet the heart is very much slowed, so that it is possible that the amount of blood sent into such an organ as the kidney in a given time may remain the same, whereas, such a drug as digitalis, producing a rise of blood-pressure and a contraction of the kidney vessels, may cause an increased quantity

of blood to pass through those vessels, and thus it acts as a diuretic Inasmuch as spartein has not a marked diuretic action, we must also assume that digitalin has some peripheral action on the secretory apparatus of the kidney " Dr Phillips concludes his paper by calling attention to the value of the plethysmographic method of experimentation in regard to the action of drugs on the circulation

A NEW DANGER FROM OLD RAGS —A writer in the *Lancet* calls attention to an unsuspected danger from old rags, cloth, and rubbish A lady, the head of a school, found a miscellaneous mass of such stuff in a number of bolsters and pillows that had been in use in the school It seems that the practice of stuffing bedding with such material is very common It is possible that this may account for some of the mysterious outbreaks of infectious diseases in schools and families

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY

Stated Meeting, October 17, 1887

THE PRESIDENT, W T BELFIELD, M D, IN THE CHAIR

DR E FLETCHER INGALS reported a case of

RETROPHARYNGEAL ABSCESS

The following is one of unusual interest on account of the deep fistulous tract which remains, and as an illustration of the necessity for prompt incision for the evacuation of pus in cases of retropharyngeal abscess

Mrs H P, æt 44, was sent to me during the month of August from a neighboring State for an opinion She complained of an oppressive, purulent discharge from the pharynx, with more or less pain between the shoulders, cough and night sweats She stated that the discharge would occur every few days, and that afterwards she would be free from cough, pain or other annoyance for some time, when the symptoms would again come on gradually and increase steadily until another evacuation of the pus occurred

Six months before coming to see me she had been attacked by soreness and swelling in the naso-pharynx The swelling had gradually extended downward, causing more or less difficulty in swallowing and respiration, and had been allowed to take its course for two months, when an opening was made in the lower part of the pharynx which gave vent to a large quantity of offensive pus Subsequently the incision closed, was reopened twice, and finally it had remained patent While the swelling was still in the naso pharynx she had for some time also a purulent discharge from the right ear I found the patient anæmic, weak and emaciated, weight only 94 pounds, instead of 112 pounds when in health Pulse 132 Tongue red and glazed in centre, but the appetite good The cough was not constant, but it usually troubled her considerably every day The pains of which she complained were not severe and were confined to the chest and shoulders

Upon examining the chest I found no abnormal signs excepting slight feebleness of the respiratory sounds over the lower third of the right lung A mucus polyp half closed the right naris, larynx normal When the tongue was forcibly depressed I could see, a little to the right of the median line, at the lower third of the larynx, a small red fungoid mass, about the size of a pea. The vault of the pharynx was normal, and nothing else of an abnormal character could be seen I removed the fungoid mass with a snare, and beneath it found an opening about two millimetres in diameter, into which I passed a small elastic catheter, which I gently pushed down the fistulous tract thirty centimetres, when she complained of its extremity causing her pain a little to the right of, and below the right breast

The position of the lower end of the fistula seemed in some way to account for the enfeebled respiration at the lower third of the right lung The patient did not wish to remain in the city, I therefore was unable to see her when there was pus in the cavity, and consequently could not determine the exact position of the lower end of the fistula

I recommended removal of the polypus and washing of the fistulous tract daily with carbolized water or peroxide of hydrogen through the catheter introduced to its bottom Tonics were also suggested The result of the examination was communicated to her physician, but I have heard nothing further of the case I was under the impression that when the lower part of the sac was filled with pus it might be possible to detect it and make a counter opening through the pleural sac, whereby constant drainage could be established so that healing of the fistula might be effected

DR F O STOCKTON said It seems to me that this sequel of a retropharyngeal abscess is something a little out of the ordinary run I must say that in my experience I have never met with anything that has produced any such symptoms, although I have frequently met with fistulas resulting from a retropharyngeal abscess The case is interesting as showing what may occur when an abscess of this kind is not recognized in time Abscesses are liable to burrow deeply, and in a location like this where the soft tissues overlie a hard, bony substance, an abscess with a tendency to burrow could easily go very deep and by pressing upon the nerves produce these pains, but it seems strange, unless the nerves were bare, that passing a small catheter down should produce these pains below the right breast It looks as though some of the spinal nerves might have been laid bare by this burrowing of the pus In a case of that kind I think what the doctor suggested was about the only thing that could be done, although I

can hardly see how the opening he suggested could be made so as to give thorough drainage without injury to some nerve or other important structure

DR W E CASSELBERRY said that the subject is one of interest for two reasons, *first*, retropharyngeal abscess is not a common disease, especially in the adult It is oftentimes overlooked, and the responsibility rests upon the physician in all cases where there is dyspnœa, continuous or paroxysmal, to make a thorough examination of the throat both by inspection and palpation, in order to determine the diagnosis *Secondly*, it is of interest on account of the peculiar complication in this case I have seen the record of a similar case reported by Cohen among a number of cases of retropharyngeal abscess having some peculiarities In this one a sinus burrowed deeply between the œsophagus and trachea and finally pointed externally low down in the neck, and pus was evacuated by incision On account of the loose connective tissue in this region and the influence of gravity, the natural tendency is for the pus to burrow downward and other cases of the sort will doubtless be observed

In reply to Dr Strong as to how he would make the opening suggested, Dr Ingals said I thought that when that sinus was filled with pus there might be a considerable collection, a pocket perhaps of a couple of inches in diameter, and if it was of that size I could find the location and when found, I believed I could get into it I should not hesitate to plunge an aspirator needle into it, even passing it through the lung if necessary I am reminded of a case in an infant that I saw so many years ago that I am not ashamed to tell of it—I then thought the child died of convulsions, but I think now that it died of retropharyngeal abscess I know from reading of these cases that in young children sudden stopping of the breath occurs that seems as if from closure of the glottis, but there is none of the sound that occurs with spasm of the vocal cords Last week I had a man of perhaps 50 years of age sent to me, the word that came with him was that he had stenosis of the larynx and that something must be done I took my laryngeal mirror to examine his larynx and found a large swelling in the pharynx which I could see by depressing the tongue It was a retropharyngeal abscess which had existed four weeks He swallowed with difficulty, but opening of the abscess relieved the dysphagia

DR A B STRONG read a paper on

SUBPERIOSTEAL RESECTION OF A RIB FOR EMPYEMA IN CHILDREN, RECOVERY

(See page 779)

DR E FLETCHER INGALS Some four years ago I reported fourteen cases of empyema I had treated, and since that time I have treated a number of others I have had no experience with the method adopted by the reader of the paper, but one of my patients unfortunately had the operation done upon him I have not very much sympathy with the operation excepting as a last resort to allow of greater contraction of the chest The author of the paper performed the operation skillfully and his patients recovered, I fear if I had performed it my patient would have died But I can open the chest otherwise with safety to the patient and satisfaction to myself I have treated several cases of empyema similar to those just reported, one very young child, perhaps a year and a half old, where recovery followed simple aspiration I recall two others which were similar to the first case reported, in which the disease had run from three to five weeks Drainage tubes were inserted through a trocar, and the cavity washed out frequently, and in both the drainage tubes were required only between one and two weeks, and the patients were well within three weeks I think they recovered more speedily than they would have done if the rib had been resected Another case I have in mind had been sick longer, two or three months, when I first saw it, and it was perhaps six weeks before the child recovered In all of these cases the expansion of the lungs and chest wall became perfect

I think children are quite as likely to recover by this method as when ribs are resected, and I think we avoid a great danger I feel confident that I have seen cases die from free opening in the chest cavity, and I do not think it a wise practice to open the pleural sac in this manner However, I have seen two cases die within a few hours after simple aspiration, but I do not know whether the removal of the pus was the cause of death or not One was a child who had been suffering from scarlatina and was so nearly dead that she did not feel the puncture of the needle, and the other was an aged man In the case reported of the boy 17 years of age, I think drainage tubes would have acted quite as well introduced through a trocar, though not quite as large tubes could have been introduced, but I do not think such a large tube necessary With two drainage tubes one-eighth of an inch in their inside diameter I think there is no difficulty in washing out the chest and doing it thoroughly

One point spoken of in the paper I am glad came up, as it brings to mind something important in the operation, that is do not operate too low In this case the 9th rib was resected, if it had been the 6th or 7th rib there would not have occurred the trouble which was experienced afterwards I have had the same trouble through the introduction of drainage tubes too low One patient in whom the tube was introduced in the 7th or 8th interspace near the angle of the rib wore it several months, but finally died of pneumonia of the opposite lung, and on examination I found the drainage tube for two inches in its course upward bound to the chest wall by the diaphragm which had crowded upward My rule is to make the opening within an inch and a half of the surface of the fluid when the pleural sac is about half full, if the cavity was filled I should go between the 6th and 7th ribs, or the 7th and 8th near the angle The method that I have used in introducing drainage tubes would perhaps be of some interest At present I use a broad flat trocar that is wide enough to allow the introduction of two of these tubes at once, that is two tubes with an inside diameter of one eighth inch First making a very

small opening in the skin with a scalpel, the trocar is then plunged in the cavity, and as the stilet is with drawn, I place my thumb over the canula to stop the flow of pus, the tubes that have been prepared be fore hand, are then slipped rapidly through the canula to the required depth, and the canula is at once withdrawn No air will have entered the chest and not more than two ounces of pus will have escaped To make the tubes I take a piece of two feet in length, cut it half way across near the middle, fold it on itself and stitch the two sides together so that the tubes can be spread apart in the chest In one of these tubes I make openings for about four inches, in the other one or two openings close to its extremity The outer ends of the tubes are tied tightly so that the pus will not flow till I am ready to fasten the tubes in I cut off two half inch sec tions from the same tubing and pass through each two bits of string, the ends of which are tied in loops, these are carried over the drainage tubes down to the surface of the chest, long strips of ad-hesive plaster are then passed through the loop and fastened to the chest when the tubes will be firmly fixed I then carry a rolled bandage around the chest over the strips and the dressing is complete If the patient is in good condition, I then at tach to each drainage tube by means of a bit of glass tubing longer sections of tubing which have been filled with water, that can reach to the bottom of a basin of water sitting on the floor, the strings which have fastened the ends of the drainage tube are then cut and the pus allowed to escape, or such part of it as is deemed advisable I recall one case in which I am satisfied if I had allowed any quantity of pus to escape at first it would have been fatal On one or two occasions I did allow more to escape than was desirable and I had to inject water into the chest to replace it

The after treatment that I have employed consists mainly in washing out the chest twice a day with a solution of carbolic acid 2 per cent at 100° F With tubes placed in this way the patient's friends can perform this office, and the physician will not be obliged to see the patient but a few times, once a week or once in two or three days, according to the intelligence of the attendants I think, however, that in adults where the lung expands with more difficulty, one should be very careful to watch the case about the fifth or sixth week to insure final closure of the cavity I have seen cases in which at this time I think the closing up of the cavity ceased from lack of proper stimulation It is very easy to measure the size of the cavity by filling it up with water and measuring the water as it flows out At first the cavity will rapidly diminish in size, but after two or three weeks it closes more slowly, and after the fifth or sixth week the healing will cease in some cases At this time I have used satisfactorily washes of solution of the sulphate of zinc or copper, I like best the sulphate of zinc In two cases of adults where I could not watch them closely at this time, I have had some difficulty later on in closing the cavity I stated in the beginning that I had per-sonal experience in only one case in which resection of the rib had been done The patient had been sick about two years when I first saw him I intro-duced the two drainage tubes as described and the cavity closed until it would only hold about an ounce, but there seemed no way to get this cavity to heal, however, the gentleman was satisfied and went about his business, until finally he fell and broke his arm and went into the hospital While there it was concluded to resect one of the ribs so as to allow the cavity to close entirely In resecting the rib an artery was cut, and the surgeon had great difficulty in stopping the hæmorrhage The resec-tion did no good though larger drainage tubes were introduced, they did not cleanse the cavity better than the smaller ones, and the man still wears them From my experience I believe that where two tubes are introduced as I have directed, and washing is carried out through first one and then the other, there is no difficulty in cleansing the cavity per fectly, unless gangrene has occurred Flakes of lymph will be readily washed out, or if too large they will be disinfected so as to remain harmless until they finally break down or become organized with the new tissue that binds the two pleural surfaces firmly together

DR JOHN D SKEER I have not had much ex-perience in exsection of the ribs for drainage pur-poses, but as far as the operation is concerned it is certainly not a very formidable one when performed as Dr Strong has described it, by making the oper-ation subperiosteal I have had a great deal of trou-ble, in my practice, in the drainage of chest cavities with small drainage tubes I recall a number of cases in the army, and I think now that if I had those cases under my care I would exsect a portion of the rib The rapid flow of matter under these circumstances does not necessarily follow The opening into the cavity may be small or large, ac-cording to the size of the drainage tubes, and the flow of matter can be moderated according to the requirements of each individual case The impor-tance of this grows out of the fact that the lung be-comes bound down by bands and adhesions which prevent its rapid expansion, and there may possibly be ulcerated spots admitting air into the pleural cav-ity, and pus into the lung tissues, from a too ready expansion of the lung, and it takes time for these bands and adhesions to soften down, relax and ex-pand to accommodate the lung in its natural expan-sion We should differentiate between *serous effu-sion* into the pleural cavity and suppurative inflam-mation of the pleura

DR H T PATRICK My experience with this operation of resection is limited to one case, which I had under observation three years ago It was not a case of simple empyema, but a pneumo pyo-thorax of a boy ten years of age, of over a year's standing, with considerable retraction of the chest, and a small external opening Three ribs were re-sected, the 6th, 7th and 8th The ribs were mark-edly overlapping one another, and for that reason more were removed The boy made a very satis-factory and rapid recovery, he had considerable temperature and was much emaciated, but immedi-

ately after the operation, the chest being washed out once a day, he lost his temperature and at once began to flesh up, and in a few weeks was entirely well In regard to the operation, my idea is that it should be limited to this class of cases I should say that in empyema aspiration, incision and drainage, and resection of the rib, should be the order of procedure In Dr Strong's second case the lung failing to expand well points out one of the weak points of the operation as a primary procedure Had aspiration been performed first I think the conditions would have been more favorable for expansion than by making as free an opening as for resection and allowing air to enter the cavity I think we follow right in the line of Nature's efforts in these cases of retraction of the chest wall, we allow the chest to fall in and approximate itself to the other surface There are other dangers connected with this operation as a primary procedure, one is that there are cases on record where, under an anæsthetic, the cavity has ruptured into a bronchus, and the patient has choked to death Deaths have also been recorded from simply washing out the cavity

DR N H PIERCE There is one thing that I would like to suggest in this connection, and it is this As I understand it, we resect a rib to simply enlarge our area of drainage In a case that I had in the last month where I had drawn off nearly three gallons of fluid in three *tempos*, I first merely inserted a drainage-tube one-half inch in diameter, this drain was constantly being plugged up by coagula, or whatever it might have been, thus causing retention and absorption of the purulent matter, followed by the usual symptoms I resected a rib after that and introduced a drainage-tube one inch in diameter, with the advantage of not having it clogged up again, the patient is making a good recovery Another point is, that there have been a number of cases reported from the Berlin clinic, of death from drowning occurring from washing out the cavity while the patient was under ether, there being a communication between the pleural cavity and the lungs It is well, therefore, that the primary cleansing be delayed until the day following the operation I have, in three cases of this character, let out the entire contents of the cavity, amounting in each case to three or four pints, with no abnormal result Using as an antiseptic lavage a saturated solution of boracic acid There have been deaths reported from the use in the pleural cavity of carbolic acid, thymol and salycilic acid, and the only agent that has not been proven more or less dangerous when used in the pleural cavity is boracic acid, and Dr Fraenkle insists that this is the only thing that should be used in this capacity

DR A B STRONG was very glad to find that his article had excited so much interest It is certainly a practical subject, and one we are likely to meet with any day, and I am yet in favor of resection It is my impression that the first resection was made about fifteen years ago A point against resection was raised by Dr Ingals—that of the too rapid evacuation of the matter That point was ably answered by Dr Skeer, who said that when we have free evacuation we have a corresponding influx of air which takes the place of pus I believe that to be so In the two cases reported there was considerable cough at the time the chest was opened, but that quickly subsided I had no fear that there would be rupture of the lung, I could feel the pleura three fourths of an inch thick Until some better reasons are given for not operating, I shall certainly be in favor of making a free opening by resection I want to make an opening large enough so that I can get into the cavity and evacuate it freely, I cannot get out enough pus through an eighth of an inch opening to satisfy me In the case of the older boy, shreds of lymph as large as the little finger were thrown out for several days I have no fear in opening the chest freely and draining it freely

(*To be concluded*)

OBSTETRICAL SOCIETY OF PHILADELPHIA

Stated Meeting, Thursday, October 6, 1887

THE PRESIDENT, THOMAS M DRYSDALE, M D, IN THE CHAIR

(*Concluded from page 761*)

DR H A Kelly read a paper on

PALPATION AND SOUNDING OF THE FEMALE URETERS,

in which he stated that he made it his routine practice to examine all gynecological cases with reference to the condition of the ureters Since Dr Sanger had demonstrated to him in the summer of 1886 the facility with which both ureters could be outlined through the anterior vaginal wall and traced back to the posterior pelvic wall, the speaker had made a long series of confirmatory observations and in some instances demonstrated the value of such observation by finding disease of the ureter Dr Kelly had added to this a method of his own by which the ureter is picked up and handled bimanually, and with the exact knowledge thus gained as to its position, he then proceeds to catheterize it with Pawlik's catheter He detailed a case in which the catheter was thus introduced into the ureter and passed back to the post pelvic wall The urine escaped in little gushes of from 10 to 15 drops every ten or fifteen seconds, evidently accumulating beyond the catheter until the pressure became sufficient to dilate the ureter and let the urine pass down into the eye of the instrument About 3 drachms of urine were drawn in this way, and on removing the catheter, about 5 ounces of urine were drawn from the bladder A disadvantage of Pawlik's catheter is that the sharp eye sometimes catches and tears the mucous membrane of the ureter

Dr Kelly showed some sounds which he had constructed some time since when studying this subject, but considered them inferior to Pawlik's instrument The value of knowledge which may be thus gained was illustrated by reference to a recent case of severe operation, removing adherent, pus containing ovaries and tubes On the second day urine appeared in the

tube and flowed freely The only way of determining from which kidney this flow came is by catheterization of the ureter

Dr Chas M Wilson thought that such an instrument, used in cases with a history of pyelitis, might be the cause of serious trouble He has tried in a number of cases to palpate the ureters by Dr Kelly's method, in a few elderly women he has succeeded, but in nulliparæ with firm tissues he could not distinguish the ureters

Dr J Price considered these methods of examining the ureters of but little practical use, for trouble does not exist in the ureters alone, but in all the pelvic organs and kidneys, and when these are distorted by new growths and inflammatory products it would be very difficult to locate the ureters The case cited by Dr Kelly in his own experience shows how difficult it is, even with the fingers in the pelvis while removing uterine appendages, to locate the ureters through one layer of peritoneum, to say nothing of the conditions when we have to deal with inflamed and thickened vaginal walls

Dr Montgomery thought it would require extreme skill to pass such fine instruments without doing injury to the mucous membrane Dr Bozeman, in a paper read before the Ninth International Medical Congress, recommended dilatation of the ureters and washing out of the pelves of the kidneys and ureters in pyelitis, even advising splitting of the bladder through the vagina in order to reach the orifices of the ureters

Dr Walker was very much interested in this subject and has been desirous of accomplishing this procedure in some patients that he had in his care in the Philadelphia Hospital He had succeeded in palpating the ureters in males, but not in females This ability to pass a catheter into the ureter will enable the surgeon to determine in any given case which kidney is diseased

Dr Kelly offered his services in sounding ureters to any member of the Society interested in following up the subject As for danger, there is none The instrument must be lightly poised between thumb and fore finger and gently passed in, or not at all The sensation when the end of the catheter is caught by the ureter and it begins to pass up the tube is characteristic Dr Walker is certainly correct in his high estimate of the great value of the possibility of sounding the ureters free hand in certain puzzling renal cases As to Dr Price's remark, cases in which there is much pelvic cellulitis are not those in which we desire to sound the ureters Ureteritis is a distinct, well defined disease He treated one case which he cured by opening the base of the bladder The whole trouble lay in the extremities of the ureters The first to suggest splitting the vesico-vaginal septum and rolling the ureteral orifices, and thus under guidance of the eye catheterizing them, was Dr Emmet Pawlik's work was but the culmination of a vast number of attempts to accomplish this, from Tuchmann, who attempted to clamp the orifices of the ureters, and Selbermann, who tried to choke them by a bag of quicksilver, and Simon's dilatation of the urethra, and Noumann and Gruenfeld, who tried to reach it by endoscopic methods Sanger showed how readily the ureters can be palpated, and I think by combining a careful bimanual palpation according to my own method and following this with a free hand catheterization of the ureters already so distinctly located, I have added a method of real value, simplifying this difficult subject It is not true that great skill is required to thus palpate the ureters I can teach any one to do it

Dr Hirst reported a case of

TYPHOID FEVER IN A PREGNANT WOMAN

The impression still prevails in some quarters among general practitioners that typhoid fever will not attack a pregnant woman, an idea originating, doubtless, in the teaching of the famous Rokitansky, who believed that the condition of pregnancy granted a woman immunity from this disease It is unnecessary, of course, to point out the fallacy of this opinion or to refer to the statistics of 322 cases of typhoid fever during pregnancy collected by Charpentier The case that I would report occurred in a young prima gravida who was admitted to the Philadelphia Hospital in the second week of the attack The disease presented all the characteristic symptoms in a typical manner, leaving no doubt as to the diagnosis On the tenth day after her admission to the hospital the woman gave birth to a child which corresponded in its development to the seventh month of intra-uterine life The infant died two weeks after birth but, unfortunately, the cause of death was not ascertained An interesting feature in this case was the effect of labor upon the temperature As uterine contractions began the woman's temperature was 104 2°, but it steadily lessened as labor advanced, until directly after the expulsion of the child it was only 95° Under the influence of external heat and stimulants hypodermatically, the patient reacted and made a good recovery

Dr Longaker remarked that Dr Hirst deserved credit for bringing this subject forward We are perhaps too much in the habit of regarding with suspicion cases of typhoid fever in the puerperal state His experience had taught him that high temperature in typhoid fever in the pregnant woman was incompatible with fœtal life He had been recently associated with such a case which ended fatally

Dr Chas M Wilson had under his care a pregnant woman with typhoid fever in whom the temperature rose as high as 106+° and was not reducible for several hours, but the child survived and was delivered alive at term Numerous similar cases are on record, so a temperature as high as 106 + is not necessarily fatal to fœtal life

Dr Montgomery remarked that in the majority of cases maternal typhoid fever is fatal to fœtal life Premature labor has occurred in all such cases that have come under his notice In one such case the temperature rose to 105° and miscarriage occurred, and was followed by a fall of temperature to 97°, with collapse from which it was very difficult to restore her The temperature again rose to 105°, and after a protracted illness the patient recovered

Dr W S Stewart remarked that in one case of

typhoid fever, about the sixth month of pregnancy, in which the patient became emaciated to a remarkable degree, she recovered and was delivered of a living child at term The temperature did not rise very high

DR J C DACOSTA stated that these cases do not all abort or die He recalled one case in particular with a temperature of 105 5°, with characteristic typhoid eruption and intestinal hæmorrhage, four stools containing each from one to two pints of blood having been passed, which went on to full term, twins being delivered alive

DR HIRST, in closing, stated that although the temperature of his patient remained at 95° for over twelve hours despite all that could be done to raise it, she did not appear in collapse, but looked and felt quite comfortable The prevalent idea as to the danger to the fœtus of high temperature in the mother would appear to be erroneous Runge's well known experiments are often quoted to support the view that the fœtus is in danger if the mother's temperature reaches 104°, but Doléris in 1883 showed that if the maternal temperature is gradually and not quickly raised the fœtus remains unaffected Runge, in a second set of experiments, found that Doléris' conclusions were correct Preyer on one occasion actually found a temperature of 111° in the anus of a living fœtus

DR PARISH considered that the high temperature in disease was accompanied by blood changes which contributed to the fatal result

DR J M BALDY read a paper on the administration of

SALINES IN PERITONITIS FOLLOWING ABDOMINAL SECTION

Twenty five per cent. of the deaths following abdominal section are attributable to peritonitis (Agnew) Taking the hint from Mr Tait, I never take any steps to prevent a movement of the bowels after operation, and routinely administer salines on the second or third day, repeated in small doses, especially when there is distension and persistent bilious vomiting The results following this course have been most satisfactory I have used salines in large concentrated doses, ℥j, repeated several times and aided by large, 2 quarts, turpentine enemata in fully developed peritonitis, with the best results The symptoms begin to subside almost immediately when the bowels commence to discharge watery stools The treatment is in every way preferable to the use of opium, and is logically infinitely better than the narcotic Opium only does good by relieving pain, at times, in enormous doses The bowels are already "in splints" from the disease and do not need the aid of the drug for that purpose Opium, however, does a world of harm It helps keep the bowels in splints and so favors the formation of those great masses of adherent intestine and organized bands which we find so often the cause of subsequent intestinal obstruction Still worse, it closes all the avenues of escape for the poisonous products of inflammation found in this great lymph sac, and in this manner keeps up the inflammation much more surely than the rubbing together of the peritoneal surfaces will With salines, however, an active peristaltic movement is kept up which tends to prevent the formation of adhesions and bands They drain the abdominal cavity of the products of inflammation, and by depleting the blood-vessels of the intestines and peritoneum tend to prevent the throwing out and organizing of lymph to any great extent There are, of course, dangers in the production of large watery stools, but the treatment must be used with care and judgment I would suggest that in the after treatment of abdominal section the bowels be moved as a matter of routine on the second or third day after operation That on the first access of pain and soreness with distension, a brisk purgative be given at once In case a general peritonitis is developed, the production of large watery stools should be secured as quickly as possible, by purgation and stimulant enemata, the amount of purgation to be controlled in accordance with the strength of the patient The salines as suggested originally by Mr Tait are perhaps the best of the purgatives for the purpose

DR WATSON remarked that Mr Tait had been led to the use of salines because he had always observed bloody serum in the peritoneal cavity after death from peritonitis Dr Watson has been in the habit of using saline laxatives whenever he has found signs of beginning peritonitis after labor Once after craniotomy, and again after a very difficult labor he found their use of very decided benefit in cutting short threatened attacks of peritonitis, both cases had good recoveries

DR LONGAKER remarked that Dr Bantock, while in this country recently, had expressed entire want of faith in any benefit to be gained from the use of salines in peritonitis

DR PARISH explained that peritonitis as seen by Dr Bantock was always of septic origin, and the patients would die under any treatment That form of peritonitis is preventable The saline treatment is quite reasonable, it is an adaptation of an old method of treating dysentery and inflammatory diseases of the intestines

DR WALKER had employed salines as depleting agents in various inflammatory diseases When the depletory action is desired, concentrated solutions should be administered A weak solution will act simply as a laxative

DR CLEEMANN had had success and failure with both the opium and saline methods of treating peritonitis Salines had been recommended years ago by Dr Meigs in the treatment of peritonitis Several successive attacks of typhlitis in one patient had been subdued under the use of opium A case of peritonitis under his care had shown progressive relief after every movement of the bowels, the result of a dose of castor oil As the opium treatment has been adopted by the majority of physicians, it is presumably the best

DR KELLY cordially endorsed the general tone of the paper, and believed that serious consequences will often be averted by a timely free depletory purgation He had used calomel and soda, but now

considered salines better All peritonitis is not, however, as the speaker would urge, to be so treated There is a dry form, which I have verified by post mortem examination, which corresponds to the friction dry stage of pleurisy, which is better treated by opium We must bear in mind that the depletion of the intestinal villi only quickens the absorptive activity of the peritoneum, and a large accumulation within the peritoneum may readily be too great to be thus disposed of Here the drainage tube saves lives by disposing of the excessive and often unavoidable serous weeping from wounded peritoneal surfaces I call this my *fifth emunctory*, and it is better than all the natural emunctories in these cases, when properly handled, disposing of accumulations at once, without in the least taxing the powers of the patient Next to the drainage tube the best emunctory is that nearest the field of activity, the intestinal tract, and next, but much inferior to this, come the kidneys, then the skin, and lastly the lungs

Dr Montgomery resorts to closely restricted food and drink and the administration of concentrated doses of salines in commencing or threatened peritonitis He adopted this method at the Med Chir Hospital recently in a case of peritonitis consequent on the presence of a malignant tumor which could not be removed He did not use a drainage-tube, but kept the patient on restricted diet and drink, applied a light bandage and administered salines

Dr J Price thought the preparatory treatment of paramount importance in abdominal surgery After an operation opium is simply harmful, while salines are soothing to the patient and prevent flatulent distension Upon the slightest indication of peritonitis use them freely, and it is simply wonderful what rapid disposition is made of the thirty seven varieties, according to Sternberg, of rhizopods and boa constrictors Again, the drainage tube is of the greatest importance in preventing peritonitis It usually does its work, if managed well, in the first twelve or twenty four hours

Dr Baldy does not think there is such a thing as dry peritonitis The idea of administering salines is to deplete, and concentrated solutions should be used The use of opium by the majority does not prove it to be correct

ST LOUIS MEDICAL SOCIETY

Stated Meeting October 1, 1887

The President, S Pollak, M D in the Chair

Dr W B Dorsett presented the specimens of a case of

CANCER OF THE UTERUS

M N, æt 63, German, widow, mother of five children Admitted to Female Hospital, August 8, 1887, suffering with "general debility," or, as she expressed it, "weakness" About a week after admission she called my attention to a swelling in the right groin Upon examination it was found to be about the size of a walnut, firmly fixed, indurated at its margins, with a small spot in the center which slightly fluctuated Pressure, although firmly produced, caused no pain The presence of this tumor (an indurated gland) led me to make a careful examination All of the external organs of generation were found to be perfectly normal Upon passing my index finger into the vagina, I found it to be only 1½ inches in depth The anterior and right lateral wall hard and unyielding, cervix uteri hard, uterus firmly fixed Bimanual palpation did not reveal the position of uterus, so firmly was it bound down in the pelvis A round tumor similar in size and shape to the gland in the right groin could be felt immediately above the pubes It was so firmly fixed that it could not be moved in any direction A very offensive discharge tinged with blood was issuing from the vagina, a discharge characteristic of cancer of the uterus The examination caused the patient no pain, and upon interrogating her closely, she said she never suffered any pain in that region, and in fact did not know that anything was the matter, except that she was very weak There was this offensive discharge, not very copious, no pain, and no hæmorrhage at any time Her appetite was remarkably good from the time of her admission to the time of her death, 52 days The treatment consisted in nourishing diet, tonics, and, as she was habitually constipated, laxatives As she always slept well, and never complained of pain, no sedatives or hypnotics of any kind were given She grew weaker daily, and died September 29, of exhaustion

Post-mortem examination made by Dr F D Mooney about twelve hours after death Body much emaciated, somewhat pale in color, but not distinctly of characteristic cancerous hue Uterus bound down in pelvis firmly, and was only removed from pelvic cavity with difficulty, and when taken out, the uterus, bladder, vagina, and right ureter and kidney, present this appearance On the posterior wall of bladder is seen a hard tumor, about the size of a walnut, breaking down in center, and is the tumor I felt in making the digital examination Anterior and right lateral vaginal wall hard and thickened, cervix uteri hard and nodulated Right broad ligament much thickened, nodulated and slightly friable Right ovary in the same condition, adhesions very firm between the cancerous (?) mass and right pelvic wall The fundus and anterior aspect of uterus free from pathological changes, posterior aspect of body infiltrated and firmly adherent to cancerous mass The right ureter was found passing down behind the tumor and dilated above the tumor to four or five times its natural size Pelvis of kidney in same condition as to dilatation The most interesting feature in this case was the total absence of pain Lawson Tait, in his work on "Diseases of Women," page 59, states that "This disease is at once the most painful of all the manifold afflictions from which humanity suffers, and the most terrible because nothing can be done for cure, and even our palliative measures are insufficient" And Thomas, in his work in enumerating the varied "symptoms of cancer," heads the list with *pain*.

next comes metrorrhagia in short, all writers I have consulted on this subject agree that pain and hæmorrhage are the chief characteristic symptoms of this disease

In this case they were entirely absent, still the characteristic odor of the discharge was present, and from the odor of the discharge and from the pathological condition (not microscopical) found in the post mortem, I am of the opinion the condition is cancerous

DR HULBERT It was certainly very remarkable that she did not suffer any pain Examination of the tumor shows that the uterus is hardly affected by it, and as to the adhesions existing, I should judge that they had been due to pelvic peritonitis It may be possible that the absence of pain is because it was entirely developed in the broad ligament The cancer coming out so gradually in the loose connective tissues, it made its way without involving any of the nerves, and so the pain would not occur I have been astonished at the amount of degeneration that has occurred from cancer, and the slight amount of pain the patients suffered In two cases I saw the uterus was to a like extent involved

DR LUTZ In cancer of the bladder ordinarily there is such excruciating pain that it is unlike any other troubles One case I remember, a woman 65 years old, suffered in that way, the symptoms were a constant desire to micturate I examined her under an anæsthetic, dilating her urethra and introducing my finger, and found the entire posterior wall of the bladder covered by a growth which bled very freely on being touched The neighborhood of the entrance of the uterus was also involved, the rectum and uterus not involved The absence of pain in this case is striking In many forms of malignant growth pain is not a prominent symptom I imagine that epitheliomata are least painful of new growths I have a specimen of a man whose entire face and eye and a portion of the base of the skull and brain were substituted by epitheliomatous growth, but in a year that I treated him, he never took a grain of morphine

DR A H OHMANN-DUMESNIL presented a case of

LUPUS ERYTHEMATOSUS OF THE HAND AND ARM

It is the forty-fifth case on record In Germany, lupus erythematosus of the face is often seen, but the involvement of the hand and arm is comparatively rare, and in this country this makes about seventeen cases This boy is in his sixth year He came to me a little over a year ago, I recommended the application of lactic acid, and, subsequently, pyrogallic acid and soft soap, and it acted well for six months At first he had all the fingers involved, and the back of the arm At present it has a healthy appearance, which is due to the application of camphophenique and olive oil Commencing in the sweat glands, it extends to the upper layers of the skin It has a general erythematous character, but has nothing to do with lupus It is sometimes accompanied by pain, at present there is no pain When it first came it was covered with yellowish crusts, which consisted of coagulated blood When it heals it leaves a thin flexible scar, and there are little points, the remains of the glands Recent investigations have shown that it is due to a micrococcus It does not attack the papillary layer at all, that accounts for the thin skin Out of forty five cases the forearm was involved in only one case The average duration is six and one half years The section which I have under the microscope is made from an old preparation, which is a superficial part.

DR F R FRY exhibited a patient showing

THE RESULT OF AN EXCISION OF THE WRIST JOINT.

I first saw the patient in January, his wrist was then swollen and painful The physician who preceded me used vesicants, so that the appearance of the skin was deceiving I soon felt that there was suppuration and lanced it and found a free opening into the joint, made a counter opening, satisfied myself that there was dead bone Later, I made a still freer incision and scraped out the dead bone, put it in plaster The process continued and I had Dr Hodgen see the patient with me He agreed with me that excision was the thing to do and did the operation

DR HODGEN The operation was the ordinary one, through a single opening on the dorsal aspect. radial side, with this exception that it was only partial It is advised in these cases to make a complete excision, in this case I removed all of the first row and part of the trapezium, and also about 1½ inches of the ulna and radius At the close of operation the parts could not be brought together by about one inch, but subsequently, the inflammatory products being absorbed, this could be done, and I think that motion of the wrist is pretty good I hoped to have present an elbow that I excised about a year ago The boy suffered from tubercular ostitis, I removed 1½ inches of the ulna, one inch of the radius and one inch of the humerus There was nothing but a shell of bone The boy now has some flexion and extension, and it is a useful arm In regard to the wrist I removed all of the tissues that I thought there was any danger from

DR FRY I believe that trouble originated from traumatism, and yet it is difficult to explain the traumatism While in bed, the patient's room mate rolled on his arm, and he awoke with the pain The next day he worked hard with the hammer, and by night his wrist was practically helpless Its following so nearly upon this traumatism, and there having been nothing the matter with it before, leads me to believe that the traumatism was the cause of the trouble Prior to the operation the patient was in a very run down condition, but within a few weeks he began to gain and is now better than for several years

DR LUTZ I don't know of any joint more liable to sprain, next to the ankle, than the wrist Anything that will produce laceration of the connective tissue in the neighborhood of the joint will produce a sprain Sometimes the most trivial causes brings about inflammation about a joint, and I dare say that the doctor is correct, but he doesn't lay enough

stress on that peculiar general condition which fed and kept up the results of the traumatism A man run down in health sustains an injury, and there is an inflammation of the parts involved, another man sustains an injury of the same magnitude, and he being in good health, nothing results, which suggests the advisability of immobilizing the joint and the futility of rubbing on things I have made it a rule that when I can put the part at rest, I do it I don't see how any general condition could be made the cause of the inflammation about the wrist in this case I am in favor of the local theory They start from the local trouble and are fed by the general condition The hammering augmented it probably

Dr J K Bauduy, Jr, reported

THREE CASES OF DIPHTHERIA, ILLUSTRATING THE USE OF PAPAYOTIN

I found the first case, a daughter, with temperature of 103°, a rapid pulse and the patient greatly depressed I found on the left tonsil, extending back to the pharynx, an appearance which I said was suspicious, in the morning it was a marked case of diphtheria, the membrane extending onto the velum palati and uvula. I ordered papayotin to be applied As I am talking to a congress of medical men I will not dilate on the constitutional treatment, I think it ought to keep pace with the local treatment, however The next day two other children of the same family were affected, but as there was no more papayotin in the city, I had to treat them differently, and applied iron and glycerine In the first case I used a 5 per cent solution of papayotin, but now I take the powder and make a concentrated solution and apply every half hour, and in about twenty-four hours the membrane is about stripped off The fever at once dropped in the case spoken of, and remained that way, and I didn't use papayotin for twenty four hours I telegraphed to New York and got some more of the drug and began on the other cases Temperature, 105° in one, with great debility, membrane about the same As soon as I made applications to these cases the fever dropped, and the constitutional symptoms were less marked It is claimed for the drug that it is a germicide, and I account for its good effects from its germicidal properties, removing the influence of septicæmia by the absorption of that poisonous membrane The cases are all convalescent except one who has paralysis of the velum palati, but is otherwise doing well In the local treatment, papayotin is particularly useful, because it is not an escharotic to the normal membrane, merely eating the false membrane It acts better when prepared fresh each time *pro re nata* It acts as pepsin, and on that account has been recommended in indigestion and gastric derangements I generally add a little lactic acid to it It is valuable in preventing extension of this membrane, as extension kills the patient in a vast number of cases I put a piece of membrane in a concentrated solution of papayotin, and in about two hours it was dissolved entirely Whether it was a complete solution of the membrane, I don't know, as it was not given to a microscopist

Stated Meeting, October 15, 1887

The President in the Chair

Dr Edward Borck reported a case of

EXCISION OF THE ULNA

July 24, 1887, I first saw a man who had got caught in some machinery, which tore off all the muscles of the extensor side, laying bare the radius The pronator brevis was also torn in two, I was at a loss what to do The man would not listen to amputation No large blood vessels or nerves being injured, I removed all the superfluous muscles and let it stay till morning He had a powerful constitution, and we determined to try to save the arm The third day the pulse and temperature rose some for a day or two, then it sank down after a dose of Epsom salts, and the pulse varied from 82 to 83 for four weeks One morning about the end of August, he told me he had a chill during the night, then fever, and fearful suppuration set in, the elbow joint inflamed, and the case looked very bad The periosteum being destroyed, nature pushed out the ulna, leaving it almost bare I intended to save part of the bone, to saw it longitudinally, but the patient went from bad to worse, and I finally determined that the bone would have to be removed The tendons were all cut, and I took the tendon of the extensor minimi digiti and fastened it to the tendon of the communis digitorum, holding them together with a fine needle For a while he could move all the fingers except the little one, now he can move that too I removed the whole ulna, nature had already thrust it nearly out Already new bone had formed on the flexor side From that on, the patient did well, the wound healed kindly, except the formation of a few abscesses The power of repairing was so great that after opening one, the next day it would be healed I removed the bone September 11 For the first time he walked about to day I will present him here for your inspection I kept the arm at a right angle In the beginning, of course, I gave him nothing but a dose of Epsom salts, and a dose of morphine when he could not sleep When the fever and chills began, I put him on iodide of potassium, because it is the best antiseptic we have, I think—in large doses After the removal of the bone we gave him quinine Dressing consisted in the rinsing with Condy's fluid, and dressing with iodoform gauze In the beginning, nothing but warm salt water and antiseptic gauze

Dr T F Prewitt presented a case of

SARCOMA OF THE EAR

The case was that of a negro boy, aged 18 years He noticed about a year ago a little warty growth on the antitragus, and after about three weeks it was taken out He subsequently noticed that it had commenced to grow again in a month, it grew rapidly behind the ear He first came to the clinic June 13, and then had a projection on the front of the cartilage of the ear, about as large as the front end of a thumb, while the whole base of the ear was lifted up I diagnosed sarcoma, and as there was nothing else to do, I removed the whole ear It did

well, was healing kindly for a while, but later it commenced to grow behind the ear rapidly I concluded to attempt its removal a second time, and again commenced pretty well up and denuded bone, along the border of the superior maxilla, tied the external carotid artery—cutting the seventh pair of nerves in the first instance I removed the parotid gland, laying bare the internal carotid and vein That was three weeks ago Now it is granulating and there is no evidence of its reproduction so far

DR PREWITT then presented a case of

RESECTION OF A RIB FOR EMPYEMA

A boy 15 years old He had an attack of pneumonia beginning March 23 July 17, he first came to me, and I found an extensive effusion in the left chest, the heart pushed to the right, and respiration exceedingly difficult, he had fever and was looking badly I told the mother and himself that it would be necessary to open the chest, he was frightened and ran away, but he came back, and he permitted me to make an aspiration, when I drew off a pint of pus, and stopped then on account of dyspnœa The next day I aspirated and drew off three pints of pus, July 26, 1½ pints, again July 22 and 24, and a week afterwards I aspirated By that time it was evident that aspiration would do no good I had expected as much at first August 4, I opened the chest and resected the 5th rib, withdrawing an immense amount of pus, nearly two gallons I introduced a drainage tube, making also an opening lower down through which to run the tube Before opening the chest, there had begun to be a projection at the upper part anteriorly, about the third interspace, and looked as if it would ulcerate through in a short while The cavity was washed out and the boy improved The tube came out a few days ago

DR PREWITT also presented a case of

RESECTION OF ZYGOMA, OF UPPER JAW, REMOVAL OF PAROTID GLAND, AND LIGATION OF THE EXTERNAL CAROTID ARTERY FOR EPITHELIOMA OF THE FACE

One year ago an old man came to me, with an epitheliomatous ulcer on the side of the face, which I removed It healed kindly but he came back with the growth behind the ear as large as a hen's egg, firm, interfering with the movements of the jaw, and he was anxious to have something done I didn't give him an encouraging prognosis, but there was nothing else to do, and I attempted to remove it I cut down on it, found it necessary to resect part of the zygoma, and of the upper jaw, on account of the adhesions, and for the same reason removed the cartilage of the ear in front I had to remove also the parotid gland, tied the external carotid, and subsequently the internal maxillary on account of the recurrent flow The only things left in that region were the large blood vessels The old man bore the operation, and went home this morning

DR ROBERT BARCLAY Malignant disease of the ear is very rare, I have seen but three cases, one of sarcoma and two of carcinoma Another case, a tubercular syphilide, might have been taken for a carcinoma The sarcoma of the right concha was one inch long, ⅝ inch thick It began as a small blue spot extending directly outwards It was thought at first that it was an angia sarcoma, subsequent microscopic examination cleared the diagnosis There was nothing the matter with the ear except this growth, the glands were not involved It is the generally accepted opinion that sarcoma is very apt to be carried by the blood vessels, while carcinoma and syphilis are borne by the lymphatics If the poison in this case had been carried, we would hardly have thought that the glands would be involved, accepting this theory However, any inflammation about these is apt to cause enlargement of the glands This case I spoke of was operated upon by first removing with curved scissors, curetting and then the Paquelin cautery at a red heat It healed over, and several years afterwards there was no return of the growth After the removal of the auricle, it is a difficult matter to keep the canal from closing I have one case of atresia of the canal It was first a tubercular syphilide, then ulceration, and the thing closed with a very thick scar, except at one spot where it had been rather thin I operated, and had the usual difficulty in keeping it open I then introduced an elliptical cylinder, which has kept it open ever since The wound is cicatrized, and I hope to keep the tube there long enough to make the dilatation permanent

DR F J LUTZ Eight years ago I was subjected to severe criticism for resecting a rib, because it was supposed to be necessary I resected a portion of the ribs for pyo thorax, and I was, five years afterwards, fortunate enough to obtain a portion of the thorax *post mortem* What was then a comparatively new procedure, has since become established in surgery of the thorax in certain cases Its object in empyema is not simply an evacuation of the pus, there is another object, the approximation of the costal and pulmonic pleuræ, the obliteration of an abscess cavity hastened by diminution in the size of the thorax There is a marked difference in the two sides of the case, the left thorax is compressed Whilst in children, in whom all reparative processes are carried on rapidly, it may not be the *sine qua non*, it may not be necessary, yet in adults, many cases that are treated simply by incision and drainage tube are subsequently converted into chronic inflammatory troubles of the pleura and lung It has been suggested that a portion of several ribs be removed to facilitate the dropping in of the thorax The simple introduction of the tube does not in many cases accomplish the proper drainage of the cavity, unless it be placed in the most dependent portion, assuming the patient to be in the erect position, and a portion of the pus remains If laudable in the beginning, exposure will convert it into fœtid pus, and in spite of our efforts to wash it out the fever does not subside, septicæmia, and possibly pyemia, set up I believe it to be better surgery and safer, to proceed as Dr Prewitt did in his case

DR D V DEAN One method of treatment not mentioned, that of introducing a tube and having its other end in a fluid, keeping it constantly drained, might be better than resection

DR E H GREGORY I agree with Dr Prewitt and Dr Lutz I endorse everything that they have said There are comparatively few cases that require this graver procedure, but I certainly agree with Dr Lutz that there are certain cases in which it is required There is only one thing that I might take issue with Dr Lutz on, and that is regarding laudable pus I have been an advocate of that for many years, but there is a question in my mind whether there is any such thing

DR PREWITT So far as resection of the rib is concerned, I cannot see that it adds a great deal to the gravity of the operation It is easily done, you simply enlarge the opening into the chest, and the ribs are stretched apart, but as the contracting process goes on, these ribs approximate more closely than in health How could you retain any sort of drainage tube there without compression? Certainly, rubber will be compressed As to the glass tube, it seems to me that you don't want a solid tube sticking out into the cavity of the chest until the cavity is closed up If one could have a tube so arranged that the ends would turn up and lie against the wall it might do, but I didn't have such a tube Contraction of the chest is favored by resection, as Dr Lutz says, especially in the long standing cases of pyothorax where the lung cannot expand, and the space would be too great for the pleurae to come in apposition So we must provide for the further contraction by the removal of the bony wall I agree with Dr Lutz that, in adults, aspiration is truly worthless In regard to the antiseptic drainage which Dr Dean mentions, we might do it in hospitals, but it is not easy to do it in clinical practice, and it is out of the question in a case like this, he would never have staid on his back

DR. GLASGOW read a paper on

A NEW METHOD (CLOSED) OF TREATING ABSCESS CAVITIES

DR PREWITT I have been in the habit of injecting abscess cavities for several years with an emulsion of iodoform in glycerin I remember one case of a man who was shot in the chest I took out the ball *posterior to the scapula* Pus formed and suppuration ensued, and an opening was made in the axilla I was anxious to enlarge the opening of entrance, but he would never allow me to do it, finally, I injected the cavity with an emulsion of iodoform in glycerin He sprang up and seemed almost on the point of suffocation, and I really thought he was going to die, but reassured him It had gotten into the bronchial tubes, but from that time the cavity scarcely secreted any pus, and he rapidly recovered

Recently we had a woman, some months after parturition, with an abscess on the left side, just above the crest of the ilium, with an opening on the outer side of the ilium on the other side I was convinced that the openings connected, but was not able to demonstrate it, and I made an opening above the crest of the ilium and carried it over, made an opening below, evacuated pus and repeatedly injected glycerin emulsion, and in one of the washings water came out of the opening on the other side I don't know how the communication was made, but it seemed to pass across the pelvis Iodoform has certainly been of benefit to her, but not quite so promptly as Dr Glasgow mentions I have not had such good results, whether it is on account of the oil, I do not know As to its use in suppurating buboes, it would not be so successful, there you have a disintegrating gland that keeps up the suppuration, and often there is a chancroidal poison also

DR W JOHNSTON Those who have injected laudable pus, and no fever or unfavorable symptoms have been produced, will say that there is such a thing as laudable pus As regards injecting large abscesses, it is nothing more than applying nitrate of silver, etc, to an indolent sore, and the use of the oil would be to soothe the irritation

DR DEAN Beta naphthol, it is said, is poisonous, hydro naphthol is not so, it is claimed I have often used it

DR GLASGOW One point that was not touched on was that of dressing the abscess and waiting until it was healed before reopening it, as in fresh wounds By no other treatment can that be done, I believe

DR DEAN I think we will have to admit that the wound must be made aseptic before closing it, and that the solution that might remain would meet anything that might still exist there, supposing it not entirely aseptic

FOREIGN CORRESPONDENCE

LETTER FROM PARIS

(FROM OUR OWN CORRESPONDENT)

Antipyrin in Sea sickness—Action of Cocaine on the Digestive Tract—Diet in Gout—Potatoes as Food—Sulphobenzoate of Soda in Wound Dressing

Since the introduction of antipyrin into the therapeutics of this country by Professor Germain Sée, it has been freely applied to a variety of cases, particularly those in which pain was the predominating symptom In this it has almost completely supplanted cocaine, at least as an internal remedy For sea sickness it is now said to be unrivaled At a recent meeting of the Société de Biologie, Dr Dupuy stated that he had tried antipyrin in 11 cases of sea-sickness, and with complete success He administered it in doses of from 2 to 3 grams daily for two or three days before embarking, and this medication was to be continued during three days after departure Several theories were then enunciated as to the etiology of sea sickness, various remedies being vaunted according to the theories entertained by the different speakers According to Dr Dupuy's experience, sea sickness is a great deal more frequent and more severe in dyspeptic subjects, particularly in those who had dilatation of the stomach M Dastre said he had subjected animals to certain movements imitating as closely as possible those of pitching and rolling which one experiences on board a vessel at sea, and he found that under the influence of these

6 The objection arising from the existence of disreputable and incompetent pharmacists, applies with equal force to physicians, but has not prevented the organization of the American Medical Association

7 Such a Section would confer a social equality and standing on the pharmacists that would be healthy

8 It would throw them into professional contact with physicians pleasantly, and conferences could be had as to desirable points to be made, and the result would tend to prevent each from trenching on the other's domains

9 In the battle with disease, physicians, surgeons, dentists, specialists, pharmacists, and veterinarians, ought to move harmoniously forward against the enemy that means *war,* and *war* means *kill* or *be killed* Nothing is gained by derision and decrying opposition of one division against the other, which often result in defeat On the contrary, there is everything to be found by the mutual confidence, respect, and trust which such a Section would inspire and foster

10 The overture should come from the American Medical Association E CUTTER, M D

New York, November, 1887

MISCELLANEOUS.

OHIO STATE SANITARY ASSOCIATION —The fifth annual meeting of this organization will be held in Toledo, February 9 and 10, 1888 President, Prof E T Nelson, of Delavan, O , Secretary, R Harvey Reed, M D , Mansfield, O , from whom further information may be obtained

RUSH MEDICAL COLLEGE —In a recent number of THE JOURNAL we stated that Chas T Parkes, M D , of this city, previously Professor of Anatomy, had been appointed to the Chair of Surgery in the Rush Medical College, recently made vacant by the death of Prof Moses Gunn We are authorized to state now, that the Chair of Anatomy, made vacant by the transfer of Prof Parkes, has been filled by the appointment of Arthur D Bevan, M D , a member of the Faculty of the Medical Department of Wilamette University, Portland, Oregon, and a graduate of the Rush Medical College, class 1883

GREAT INTERNATIONAL COMPETITION OF SCIENCES AND INDUSTRY, BRUSSELS, 1888 —Eleventh Competition Medicine, Chirurgy, Hygiene, Balneology, Public Assistance Most of the Committees having asked that there should be no special regulations for their competition, it has been decided to refer to the *General Regulations* of the Great International Competition

The promoters of the Great International Competition have had a happy and fruitful idea In order to excite the emulation among the competitors, they have decided that the products should be grouped, according to their destination, so as to allow the immediate and complete study of a branch of industry, by the comparison of the similar products among the different nations Medicine is to our mind especially called to profit by this excellent innovation

And indeed, the medical sciences, as well as the arts and industries connected with them, have of late realized immense progress Such are those memorable and fruitful discoveries, made by the anatomo pathological works, by physiological experiments, by microscopical researches, and by microbiological studies Such are, besides, those remarkable ameliorations of chirurgy that allow the operator to work on all the organs of the body, even on those that by their position or their contexture, seemed condemned to remain eternally inaccessible to the hand of man

Such are, besides, the experiments of the laboratories and those scientific observations that have been the point of departure of those numerous works of hygiene the efficacy of which has shown itself by an increase of human longevity, in spite of the unfavorable conditions of modern life Such are also the therapeutic applications of the marvellous discoveries of physical sciences, thanks to which the doctor can utilize the greater part of natural agencies

The Great International Competition of 1888 offers a unique opportunity to make known to the public, that ignores it too often, that medicine has not remained stationary in the middle of the unceasing march of all branches of human activity We come to solicit your adhesion and cooperation in this generous enterprise, that will allow you to put in relief the part you have taken in these works

We submit to you the programme of the desiderata that the organizing committee of Class No 11 has decided to submit to the Competition, as well as the adopted classification for the medical compartment of the Exhibition

STAS, *President of Committee 11*
LENTZ, DR MOELLER, } *Secretaries of Committee 11*

General Classification —Subdivision 11*a* Medicine Subdivision 11*b* Chirurgy Subdivision 11*c* Public and private hygiene Subdivision 11*d* Balneology and therapeutic applications of physical agencies, aeropathy, electrotherapy, hydrotherapy, gymnastics, massage, climato therapy Subdivision 11*e* Public assistance

Officers of Committee No 11 —President, Mr Stas, Vice President of the Superior Council of Hygiene, at Brussels, Vice Presidents, Dr Crocq, Senator, and titular member of the Royal Academy of Belgium, at Brussels, and M Domis de Semerpont, General Secretary of the Ministry of Justice, at Brussels, Secretaries, M Lentz, General Director in the Ministry of Justice, at Brussels, and Dr Moeller, corresponding member of the Royal Medical Academy, at Brussels

N B —The persons who wish to obtain a complete collection of the desiderata formulated by the fifty six committees, can obtain them by applying to the Executive Committee, No 22 Rue des Palais, Brussels

Applications to be filed before January 15, 1888 Entries to be made before April 15, 1888

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OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM DECEMBER 3, 1887, TO DECEMBER 9 1887

Capt Jno Van R Hoff, Asst Surgeon, granted leave of absence for one month, to take effect on or about the 12th prox imo S O 128, Dept Mo , November 30, 1887

Capt Benj Munday, Asst Surgeon, granted leave of absence for one month, to take effect about December 15, 1887 S O 280, A G O , December 2, 1887

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE WEEK ENDING DECEMBER 12, 1887

Surgeon J M Gassaway, when relieved, to proceed to Cairo, Ill , and assume charge of the Service December 9, 1887

Surgeon Fairfax Irwin, promoted and appointed Surgeon from date of oath, December 10, 1887 December 8, 1887 [1]To proceed to Pittsburgh, Pa , Wheeling, W Va , Gallipolis, O , Evansville, Ind , Cairo, Ill , Little Rock, Ark , Shreveport, La , New Orleans, La , Rome, Ga , Chattanooga and Nashville, Tenn , as inspector November 12, 1887

P A Surgeon John Guiteras, when relieved, to proceed to Charleston, S C , and assume charge of the Service December 12, 1887

P A Surgeon C E Banks, to proceed to Portland, Me , and assume charge of the Service December 9, 1887

P A Surgeon D A Carmichael, when relieved, to proceed to Washington, D C , for temporary duty in the office of the Supervising Surgeon General December 9, 1887

P A Surgeon A D Bevan granted leave of absence for twenty days December 7, 1887

P A Surgeon A H Glennan, to proceed to Key West, Fla , and asume charge of the Service December 12, 1887

[1] Omitted from previous report

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ORIGINAL ARTICLES.

CYSTITIS IN THE FEMALE

Contributed to the Section on Obstetrics and Gynecology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY HENRY O MARCY, A M, M D, LL D,

OF BOSTON, MASS

This paper is limited to the discussion of certain changes that are of common occurrence in the bladder of the female, and that are often so intractable to treatment as to warrant the query made some time since by one of my eminent surgical friends, "Did you ever know a permanent cure of chronic cystitis?"

The mucous membrane of the bladder is composed of epithelial cells, arranged in several layers The deeper cells are round, conical, or cylindrical, but they change towards the surface, until the superficial layer is composed of flat, laminated cells, which may be always seen in normal urine Mucous glands, simple and aggregated, lined with cylindrical epithelium, are found at the neck of the bladder and towards the fundus This epithelial lining of the bladder is continuous into the urethra, and contains there numerous large glands, glands of Lithré They are often 1 millimetre or more in diameter and from 2 to 5 millimetres in length They secrete mucus This delicate arrangement of epithelium plays a more important part than is usually ascribed to it, in protecting the highly vascular tissues beneath from injury arising from contact with the urine, an organic fluid so highly complex that, under certain conditions, it easily undergoes decomposition and becomes exceedingly irritating The mucus, secreted by the glands at the base of the bladder and of the urethra, serves a valuable protective purpose, but we shall see later that they may themselves become the seat of most important pathological changes which are generally overlooked In certain pathological conditions of the bladder, these glands may be easily distinguished by the unaided eye, as small pearly vesicles, filled with a transparent, turbid, or mucopurulent secretion The vascularization of the mucous coat is then greatly increased, and the increased nutrition causes a proliferation of epithelial cells of such a rapid growth that they widely depart from an even layering of a protective character, and not seldom appear as papillæ more or less prominent The muscular fibres become greatly increased by overactivity to expel the irritating contents of the organ The development of this irregular network of muscular fibres changes the symmetry of the bladder, the mucous membrane is thrown into crypts and folds from which the urine cannot be easily expelled, and thus, from step to step, the changes in this important organ may be traced, until a pathological factorage is developed inimical to life *Pari passu* the kidney, surgical kidney so called, often, perhaps generally, becomes affected, and a chronic nephritis closes at long range what at first seemed a simple affection

There can be no doubt that the more marked structural changes which are so often met with in the bladder not only in large measure incapacitate it for the fulfilment of its normal function, but also are beyond the remedy of our art The surgical treatment of rest, applied to this viscus by the artificial vesico vaginal fistula as devised by the late Dr Sims and still to a certain degree popular, may have a narrow range of usefulness, but to condemn a patient deliberately to complete incontinence of urine for a space of six months or longer is, for the time at least, a doubtful exchange of suffering, and the secondary closure of the fistula, except in the hands of a few experts, is an operation of doubtful outcome I cannot help thinking the primal causes of cystitis are in great measure overlooked Normal urine is acid and free from ferment It is a familiar experiment, and often a satisfactory test of condition, to pass the urine directly into an aseptic flask and stop with sterilized cotton If normal, it will undergo no change so long as it remains thus protected from atmospheric germs Thus it is with the urine in the healthy bladder, and even after the introduction of septic material into the bladder, often it will fail to germinate If it grows, the cystitis resulting, as a rule, passes off in a few days as an acute attack and the patient is again well The fortunate outcome results because the ferment is placed under conditions unfavorable to growth The bladder walls are intact with its unbroken pavement of epithelium, and the healthy urine furnishes little food for bacterial development

The germ bearing catheter, however, is rarely introduced under conditions so favorable Let the bladder be over distended and the protective layers of epithelium become disturbed or broken, and the vascularization and nutrition of the organ changed Again, in the familiar instance of the over distended bladder in parturition, where injury has been caused by uterine contractions and the vascularity normally greatly increased Now introduce the catheter, ven-

erable in the service of a score of cases of cystitis and never properly cleansed, or a clean catheter with all the becoming delicacy of our early teaching, "never to expose a woman," smeared after a few misdirected efforts with septic vaginal secretions, and note results

The soil of our new field is now well prepared for the sowing, and the harvest is sure Although it does not possess the danger of a septic uterus, the result is none the less certain The bladder, under these conditions, proves an excellent culture chamber, and the bacteriological ferment grows with marvellous reproductive power The lymphoid cells of low vitalization are easily destroyed, the epithelium and albuminates are readily assimilated, the urine is no longer acid, chemical changes result in new and irritating compounds, and these mischief makers, although so long overlooked because of their diminutive size, are potent to cause irreparable damage They are destroyed with difficulty, since the contractions of the bladder in the effort to expel its irritating contents only press the ferment into each infraction of surface and the mucous glands become new centres of colonization, and it is easy to follow the secondary and marked changes so long painfully familiar to the profession

In 1881 I had the honor of contributing to this Association a paper upon the treatment of cystitis and, as the result of a long period of experimentation, I then presented a series of double rubber tubes for the injection and irrigation of the bladder These catheters are of various sizes, ranging from No 18 to 25 F, and the efferent tube is three times longer than the direct, and thus over-distension of the organ is prevented The double tube was of course no novelty, but they had never been made of *soft* rubber, and many months of experimentation elapsed before the perfection of the tubes As now made by Tiemann & Co, of New York, they leave little to be desired and are as perfect in finish as the best of soft catheters The exquisite finish of the surface and eyelet is secured by curing at high temperature in molds of very hard annealed glass

The relief sought is not a simple disinfection For reasons already referred to the cleansing of the bladder is attained with much difficulty and, on this account, the hot douche proves of the greatest service I have been for years in the habit, in chronic cases of cystitis, of directing the water to be used as hot as comfortable and to be continued for half an hour morning and evening The result is comparable with the hot water vaginal douche, not only to wash away the mucus and decomposing urine with ferments, but especially to lessen the vascularization of the bladder and aid in the reparation of the epithelial protective layers of cells A long series of experiments were undertaken to ascertain the antiseptics best suited to be used in the bladder, and the intolerance of germicides in the bladder is most remarkable Generally a 1 to 5,000 mercuric bichloride solution is followed by severe pain and tenesmus, often lasting for some hours A 1 to 10,000 solution has been used more often than the weaker solutions, and it is very effective in this strength, but not seldom have I been obliged to suspend its use entirely, or substitute a much weaker solution Only recently a case has been reported to me where a 1 to 80,000 could not be continued because of the pain The better way is to cleanse first the bladder with warm water, then use the antiseptic as strong as judged best After its retention for a few minutes allow it to escape, and follow immediately with the prolonged hot water douche By so doing, the good result of destruction of ferment is accomplished by the use of a comparatively strong solution, and the deleterious secondary result prevented by lessening the blood supply, nerve irritation, etc It is always well to remember that the water should be boiled water, cooled to the proper temperature In the city this is ever at hand in the water from the hot faucet, as this has always been carried to a high temperature before reaching the boiler

The bladder tolerates iodoform well, and the treatment is finished by injecting a few grains in suspension which is allowed to remain This soon settles to the base of the bladder and is not easily expelled It dissolves less readily in the bladder than in most parts of the body I examined recently a specimen of urine voided at will which contained a large amount of iodoform In reply to my inquiries I found the patient, a man, had for some time taken a teaspoonful of iodoform in suspension as an injection daily without inconvenience

The treatment outlined above is repeated night and morning, until the urine is free from bacteria, then daily for a period, and often twice or once a week until sure of cure The bladder tolerates hot water singularly well In a very troublesome case of cystitis in an old man with a greatly enlarged prostate, the injections were continued for a long time at hourly sittings The 4-quart rubber bag makes the most convenient receptacle for the water When properly adjusted the fluid flows in an unbroken stream into and out from the bladder with very little inconvenience, often with distinct comfort to the patient

In one case of vesical hæmorrhage, resisting all other measures, the patient in extreme danger from the loss of blood, I continued the flow of hot water through the bladder uninterruptedly for forty eight hours, followed by cure without any return of hæmorrhage

In earlier years, I often felt it necessary to dilate the urethra, as a measure also of much value in order to lessen the irritation and tenesmus It has been supposed that, in order to be of value, there must be a fissure in the neck of the bladder, and this method of treatment appears to have been based upon the remarkable results in fissure of the rectum after forcible dilatation It at least, in a measure, paralyzes for a time the muscular fibres which surround the entire urethra This gives an easy outflow to the urine with little pain or spasm for some days, and thus relieves the continued tension of the bladder I have certainly seen some remarkable cures follow this treatment There is no rule for guidance in the selection of cases, but it would appear unwise and ill chosen unless there was some organic lesion of

the urethra With the modern means of examination, there can be no reason and should be no excuse for not knowing the condition of the entire urethra Dilatation is not without some danger of ill result, hæmorrhage may be excessive and troublesome Paralysis and incontinence may follow even when care is exercised and the surgeon fully competent

One of our prominent modern authors[1] states "that the relation of cystitis to the formation of vesical calculus cannot be passed by without further notice That a certain degree of irritation, if not of inflammation, is a constant factor in stone production there can be but little doubt Let us observe what follows the excitation of inflammation of a moderate amount in the bladder, by the introduction into it of an extraneous substance A piece of bougie may thus become accidentally lodged, cystitis is produced, the urine is renderd alkaline and phosphates are thrown down in abundance and aggregated around the foreign body" Here, as with all authors, almost without exception, it is referred to the "irritation or inflammation" produced by the foreign body, as the cause of all the mischief, without a hint that the something beside the bougie, namely the bacterial ferment, was the real cause of rendering the urine alkaline and that, on this account, the subsequent chemical changes took place, resulting in phosphatic concretions

Dr Bigelow's lithopaxy has clearly taught the lesson, too little emphasized, that the "irritation or inflammation" resulting from an hour's operation within the bladder, itself seriously diseased, is less to be feared, if the organ is left *clean*, than many minor surgical operations done without aseptic conditions

In a variety of ways, the gonococcus of gonorrhœa may and actually does find its way into and reproduces in the bladder, giving rise to severe cystitis Here the common cause is the introduction of the bougie, or sound, either carrying with it the ferment already growing in the urethra, or introducing it into the bladder by a contaminated, unclean catheter Ferment thus introduced is by far the most common of all causes of cystitis The vagina is never free from actively growing organisms, and the one invariable rule of catheterization is an aseptic instrument, introduced into a surgically clean urethra As ordinarily used, an instrument for each patient means but little Let the catheter be constantly kept in a solution of mercuric bichloride, 1 to 1,000, and carefully cleansed with the same before its introduction

I have felt it a duty to enforce the above lesson, not because it presents any especial discovery or, at this date, real novelty in practice, but rather as the practical deduction of the normal evolution of the *rôle* of the ferments developing in this important organ, deductions based upon years of observation and a large experience in private and hospital practice, all the more important since, I am constrained to believe, care as above described is prevention, and measures so simple and effective in cure are yet the exception to the rule of treatment

[1] R Harrison Liverpool Encyclopædia of Surgery vol vi p 344

AFTER-TREATMENT OF CATARACT EXTRACTION

Read in the Section on Ophthalmology, Otology and Laryngology, at the Thirty Eighth Annual Meeting of the American Medical Association, June, 1887

BY W T MONTGOMERY, M D,
OF CHICAGO, ILL

Some of the gentlemen now present, will remember a brief discussion of the after treatment of cataract extraction and iridectomy, introduced before this Section one year ago, by Dr Chisolm, of Baltimore The doctor promised to give trial to the after treatment of extraction and iridectomy without the dark room, with more freedom and less bandaging, and report the result We all know how soon and how well he fulfilled his promise I stated in the discussion one year ago, that for six months previous, it had been my custom to permit cataract patients to leave their beds the third day after extraction, and the fourth or fifth day to substitute the green shade or smoked glasses for the bandage, and with better results than when I had kept the patient in bed in a dark room for from one to three weeks I continued to treat my cataract patients as I then indicated, until Dr Chisolm's first report appeared After reading that report, the question as to whether or not it is necessary to put the patient to bed at all after cataract extraction, suggested itself to my mind As I could see no urgent reason why they should be, I determined to try a more liberal treatment even than that outlined by Dr Chisolm

Since July 22, of last year, I have made twenty extractions, twelve infirmary and eight private cases, and with two exceptions all have been treated as follows Von Graefe's linear operation under cocaine was made in every case Only the eye operated on was bandaged, and the patient was put in a quiet, moderately lighted room and permitted to sit in a chair, walk about the room or lie on his bed as he felt inclined The only precautions to the patient was to avoid violent exertion or sudden jar The dressing was not disturbed until the third day unless the patient complained of pain or the bandage became displaced The third day the dressings were changed, the eye bathed, and a 1 per cent solution of atropia sulph instilled between the lids In all but three of the cases the bandage was left off the fourth or fifth day, and the shade or colored glasses substituted, and the patient permitted to go to his meals and walk about the house The exceptions were two cases in which the vitreous presented, and it was necessary to introduce the spoon to remove the lens These patients were put to bed and the eyes kept bandaged until the reaction, which was severe in each case, had subsided A third case in which the bandage was necessary for a longer time, was one in which there was extensive choroidal degeneration, and although the corneal wound healed readily, repeated hæmorrhages into the eye occurred The patient in whom this occurred had cataract in both eyes, and extensive posterior staphyloma, with barely perception of light in either I made extraction on both eyes at different times against my better judgment, but at the earnest

solicitation of the patient, and hoping to give him a little more light His vision was not improved, but it was not the fault of the method of treatment

In none of the twenty cases was there any corneal infiltration or delay in healing of the corneal wound In only one case, except those already referred to, was there iritis In this case one eye had been operated on four or five years before by the downward incision, and consequently I made the cut downward on the second eye The wound would open occasionally and the aqueous gush out The third day the patient began to have iritis, which became quite severe and delayed recovery to some extent

Two of the private patients visited my office the eighth day after operation, wearing only smoked glasses I think any of the uncomplicated cases could have done so had it been necessary At the end of the first week there was still slight vascularity of the cornea at the seat of the wound, but the eye was free from irritation and bore the light well

As to the final result I am unable to give it definitely in every case, but feel safe in saying that the vision obtained was up to the average in a series of twenty cases

It is not my purpose in presenting this brief report, to try to prove that I have obtained better results by this method of treatment than can be obtained by the old I wish simply to offer this for what it is worth towards establishing what I believe to be is a fact, and that is that this line of treatment is entirely safe I mean in uncomplicated cases without accident during operation I did not use it in the two cases with loss of vitreous, nor would I use it again in a patient on whom I had made the downward incision

I think it is generally conceded, that we cannot prevent more or less rolling or motion of the globe of the eye, no matter in what position we place the patient, what kind of a bandage we use, or whether we close one or both eyes I don't believe the motion of the globe does any harm if the lids are kept closed A very gentle pressure or force is sufficient to keep the lids of one eye closed, even when the other eye is allowed to remain open The dressing that will most effectually accomplish this, and with the least discomfort to the patient, is the most desirable In the first half dozen cases I used the isinglass plaster as recommended by Drs Michel and Chisolm The weather being very warm and the patients sweating more or less, I had difficulty in getting the plaster to adhere, and when it did adhere it soon became dry and uncomfortable to the patient I abandoned this for the gauze roller bandage, using enough absorbent cotton to even up the orbital depression and make gentle pressure upon the lid This bandage is cool and quite comfortable, and moistened before it is applied retains its position the best of any dressing I have tried

We all know how trying to the comfort and health of the patient the old-after treatment is I have more than once been more concerned about the general condition of my patient after extraction, than about the amount of vision he was going to have An intelligent lady, on whom I recently made extraction, had had extraction made on one eye four years ago When she came to make final arrangements for the operation on the second eye, she said, "I don't mind the operation a bit, but I can't bear the idea of lying on my back in a dark room for nine days as I did before " "Why!" she said, "they would not allow me to raise my head or chew anything, but kept me lying on my back until I thought I would die " The most marked advantages of this treatment over the old are

First, less discomfort to the patient, second, much less danger to the general health of the patient; third, a more rapid recovery from the operation

Needle operation and iridectomy have been treated in the same manner, except that the bandage was removed entirely the third day in most cases.

THERAPEUTICS OF PULMONARY PHTHISIS

Read before the Monmouth Co , N J , Medical Society

BY GEORGE T WELCH, M D ,

OF KEYPORT, N J

It is excellent judgment, before debating the therapeutics of a disease, to inquire into its natural history and ascertain whether there are any instances of its self-limitation and any of its cure by the use of drugs It is so much the habit of medical men, like hired archers, to rush to the rescue of every man assailed by a disease as if he were having his jugular vein drained by a tiger that, together with the promiscuous shower from slings and bows, and thrusts of the short sword, it is a cause for congratulation if the man escapes instead of his enemy And it is altogether a matter of conjecture whether his individual prowess might have succeeded in ridding him of the object of attack So much is this the case that I dare aver we know very little of the real natural history of any but the simpler forms of disease—the symptoms are so overlaid by the physiological effect of drugs But that pulmonary phthisis is sometimes self limited, and sometimes curable in a sense, would seem to be proven by a rare case now and then, though a vast majority of the affected die, and, as is shown by the Board of Health Reports for N J , a little more than 23 per cent of all deaths, among adults, in this State, is caused by this disease

And yet some escape Lænnec and Louis have demonstrated it in the wide range of statistics which they have marshalled to the fore, and it may be that every large neighborhood can furnish one instance That this could be so before more enlightened methods of practice were followed by the advanced members of the profession within the last five decades, speaks volumes for the recuperative energy of that silent force which underlies all the manifestations of life Dr Griffith mirrored the practice in this State, at the end of the last century, in his "Dissertation on Pulmonary Consumption," read before the New Jersey Medical Society, May 3, 1791 It was "small blood lettings frequently repeated, gentle emetics of ipecacuana, out door exercise, expressed oils, mucilages, emollient vegetables, opiates, ripe fruits, low diet, laxatives, blisters, setons, issues and frictions "

When the patient, nothing loath, let us hope, had arrived by such stages, hard by the iron doors that fence immortality, and things were now desperate, the good doctor acknowledges he can not be saved, but if he could it must be done by smaller bloodlettings and a lower diet!

In the year 1817, Dr M Freeman reports four cases cured out of seven by the following laudable means "I push," says he, "the lancet and digitalis cautiously but freely, that is, I *try to reduce* the pulse below 65 or 70 for the first five or six days, after which I endeavor to reduce it lower and maintain the depression for two or three weeks, in spite of prostration and nausea At the same time recommend milk and vegetable diet, together with a perfect tranquility of mind and a horizontal state of the body, when the pains are wandering about the thorax" Then he advises blisters, stimulating plasters, and a seton All this for the first stage of the disease For the second step—digitalis, a nourishing diet, which must not excite irritation The patient upon any unruly manifestation of the disease must now take oxide of mercury and be kept salivated for two or three months, and must be *dosed* with a mixture containing "four grains of alkali and a fourth of tartar antimony, given according to the age and strength of the invalid"

By this means Dr Freeman says that he cured J Devoll, Mrs Crowell, Mrs Latourett and Mrs Gage, all within a year, "now well and enjoying better health than they have had for twenty years past Two of them were under ptyaloid symptoms for sixty days before the latter disease had the ascendancy of the former they took more than 200 grains, and a constant application of the mercurial ointment" This atrocious practitioner ends by saying, "even in an advanced and fatal stage, if the stomach will bear these remedies, they will mitigate their distressing symptoms and thereby tend to smooth the declining passages and quiet the hour of death" Which is to say, if St Lawrence had been dosed with calomel, antimony, digitalis, and been blistered, bled and tickled under his midriff with a seton needle, as he lay slowly consuming on the devilish gridiron of the Inquisition, he might have gone almost voluptuously to his death!

The practice did not change much for the next thirty years, though I find in the recorded Transactions of the State Society before 1850, occasional allusions to the decrease of phthisis as though it was at length succumbing to heroic measures, but as there was no basis in statistics for such assertions they must be amiably passed by

About the year 1841, cod liver oil became generally known, and was extravagantly lauded as a curative in this disease Dr Geo B Wood, (in the 4th edition of his work on the Practice of Medicine, 1855,) speaks of it as being of inestimable value, says he gives it in all cases of the disease and at all stages, and declares its universal use has reduced the death rate from 1 in about 6 76 from all cases before 1850, to 1 in 8 22 While Condie with some enthusiasm pitted the reduced mortality of 1850–51 against the twenty-three preceding years, as being due to cod liver oil, though in the next two years the ratio increased Late in his life Condie saw fit to modify his views as to the curability of pulmonary phthisis, and in a paper on "Spurious Consumption," pointed out the errors in diagnosis which frequently attributed a cure to the former disease when the latter was alone benefited

Cod liver oil gradually fell into some disrepute, as it was found that it was unfitted to several phases and stages of pulmonary tuberculosis, and at the best only delayed the fatal issue, until now it is the average opinion that it does not exert any influence upon the structural elements of the disease, but in all likelihood receives the credit of cure in those cases where the organic trouble is limited, or is benefited by such measures as have restored other patients without it In my experience it has never answered the hope entertained for it, and I have within the last six years completely abandoned its use in the disease under consideration The digestive organs, as is well known, speedily succumb in this affection and when dosed with the oil produce, besides the dyspepsia, a loathing for food which is justly a subject of great concern, and not to be tolerated Even the emulsions produce, in my experience, the same unhappy effects

And because of this weakness of the digestive apparatus I look upon over-feeding as a means of cure, as being barbarous and unscientific I have not, however, condemned it without trial, but, though a certain tolerance for a time can be established, yet in a few weeks, or months at the best, it can be carried no further, and the fatal end is then provoked instead of banished Emaciation progresses in well defined cases, even when a moderate appetite is present, showing assimilation is not perfect, and then to crowd the function of digestion, though assisting with artificial means, is to offer an overplus of nutritious elements to tissues that can not accept the bounty

I recall several cases that for a time gave the most flattering promise under the use of maltines, alcoholics, hypophosphites, arsenic and tonics, but the medicines lost caste, they no longer held up the flagging energies, and I have often in bitterness of soul execrated the means that kept the dying on the rack For better it seemed, as I recalled the last months or weeks of sickening, sinking disease, that one could give euthanasia than with such reprieves hold the poor wretch in sight of his open grave so long

But I recall one case of a gentleman who had long been subjected to the extortions and doses of a physician who was also proprietor of a drug store When he came under my care I prescribed maltine, syr hypophos co (Fellows') and whiskey—nothing more He had a racking cough, tuberculous deposits in one lung, night sweats, palpitation and loss of appetite He was sent into a more genial climate for the winter, and the medicines were persisted in faithfully, in what seemed months of hopeless disease The cough gradually grew less and finally ceased, the pain stopped, the heart regained its wonted tone, the appetite returned, flesh was gained—in a word the man was restored to his old vigor, and for four years has fol-

lowed his occupation as a market-gardener without a return of the disease For awhile there was cavernous breathing, which in time became less and less noticeable

W N, a young man 20 years of age, who had cough, profuse sweating, loss of appetite, great debility, with signs of tuberculous deposits in the apex of each lung, and who was intractable as to the use of medicines, I sent to Florida, where, in a dry district, he spent his days in the open air for several months, riding mostly, driving, and as to drugs taking nothing but maltine He returned in May without a trace of his former disorder, and continued well for two years and a half, when a severe bronchitis was contracted, from which he was slow in recovering but without awakening the old disease

A W, æt 21, had cough, slight hæmorrhages, pain in the chest, pneumonic stitches, dyspnœa, evidences of the first stage of phthisis He was sent to Colorado, and from there, by the advice of Dr Denison, he went to New Mexico, investing in a sheep ranch and roughing it on the plains for a year or two Recovering, without drugs, from all his unfavorable symptoms, he went back to Denver, where he has now carried on a successful business, involving a great tax of energy, having several men under his employ, for the past four years, without any return of the disease

I have sent other patients to higher altitudes, on sea-voyages, to Florida, and have used whatever means appropriate climatology presented, but these three cases are the only ones I can present of arrested disease I am glad I can not remember how many others I have conscientiously treated in the light of all the recent authorities, without avail

But to these three might be added another as coming under my notice, though not at the time he was consumptive Mr H W J, a banker, who at the time I first knew him, twelve years ago, had but just recovered from an abscess in his right lung He had passed through all the symptoms of grave tubercular disease, but after this abscess had discharged itself, his health recuperated, and there were no further manifestations of the disease I have examined his chest on many occasions It is sunken on the affected side Twelve years ago there was cavernous respiration, the voice was hollow, and there were yet flying pains about the thorax As years went by cicatrization proceeded until now there is only a faint vesicular murmur to be heard, and though Mr J has had two attacks of bronchitis since, there have been no further symptoms of pulmonary disease

Dr Wm A Newall, late Governor of Washington Territory and long a practitioner in this county, has related before this Society his spontaneous recovery from pulmonary phthisis, under the influence of horse-back riding through the pine forests of this State, during some years of his early life

Dr I S Long, of Freehold, has given me the details of the recovery of a patient after profuse hæmorrhages, expectoration, sweating, and almost moribund condition, when the forlorn hope of drugs had been called off So, you will perceive it is in the natural history of this disease that patients sometimes recover without drugs, and in spite of drugs But the cases are few, and the desert is covered with the mournful drift of whole caravans between

There are a hundred so-called remedies I have not named, as oxygen, pneumatic differentiation, and others, but by a singular coincidence they that have an apparatus to sell are loudest in commendation of its process and results Bergeon's method is the latest craze, and from observations in its use during a few days, or at most weeks, it did seem to hold out some promise, while lacking the test of time which has dispelled so many mirages But it has already fallen into disrepute So, while it is well to resort soberly to all that is reasonable and scientific, I can not too strongly reprobate the extravagant use of drugs, as I have seen in many cases in which various and diverse medicines were used for every important symptom because the only known recoveries from this disease have been those in which the tuberculous deposit was limited, and were such as change to suitable climate and hygienic measures brought the highest result and would have been in all likelihood sufficient without the interference of so called remedies

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VAGINAL HYSTERECTOMY REPORT OF FOUR CASES

BY J H ETHERIDGE, A M, M D (RUSH),

PROFESSOR OF MATERIA MEDICA, RUSH MEDICAL COLLEGE GYNECOLOGIST TO THE PRESBYTERIAN HOSPITAL AND TO THE CENTRAL FREE DISPENSARY

The three cases reported herein were operated on at the Presbyterian Hospital I can never convey an adequate idea of the relief to the operator offered by the method of hæmostasis by forcipressure on the broad ligaments over that of ligatures I think no one can fully appreciate the untold superiority of the former method over the latter till he has had experience in the performance of that operation under both methods

Case 1—Mrs S, æt 47, mother of nine children, always well, presented herself February 1, 1887, with epithelioma of the cervix uteri It did not involve the vault of the vagina The broad ligaments did not seem to be thickened Mobility of the uterus was complete After preparatory treatment with a daily laxative and diuretic for a week, the operation was performed on February 8, 1887

The cervix was easily drawn down to the vulvar orifice and, with scissors, its vaginal attachment was divided Strong adhesions to the bladder and rectum were found, and in consequence thereof, the rectum was opened in one place and the bladder in two places in the process of freeing the uterus from these two organs After the two broad ligaments were sufficiently isolated and the fundus was turned backwards and brought down, the left broad ligament was first penetrated and divided into two sections with heavy ligatures, and tied as securely as hands could tie them It was then severed as closely to the corpus uteri as possible, and the whole organ came out of the vagina Treating the right broad ligament similarly was a much easier matter, because the uterus was down and out of the way This attach-

ment was at once severed and the whole organ was then freed from the patient The ovaries were then removed The rent in the bowel was closed by continuous suture without difficulty The longer rent in the bladder was then closed by continuous suture, but it was done at a great disadvantage from its peculiar position, back of the symphysis and looking directly backwards To draw down the bladder and to so evert the edges of the rent as to apply the stitches was a delicate and difficult task The smaller rent, undiscovered at that time, was not closed Just as this sewing up was completed there was observed welling up into the shapeless excavation left after the removal of the uterus great quantities of arterial blood Which broad ligament it came from it was impossible to decide After a long time the bleeding vessel, which was in the right broad ligament, was secured, but not till after a ligament was pushed off of the left broad ligament All vessels were eventually secured, but not till a great quantity of blood had been lost The top of the vagina was closed from before backwards with continuous suture, the ligatures were brought down, iodoform gauze stuffed into the vagina and the patient put to bed

Reaction followed reluctantly She died from peritonitis and exhaustion in 45 hours, having passed 8 ounces and 1 drachm of urine in the meantime The autopsy revealed a small rent in the bladder, which was concluded to be the cause of the peritonitis

Case 2 —Mrs C , æt 36, laundress, tall, spare, nervous, sanguine temperament, presented herself February 10, 1887, with a small epithelioma in the cervix uteri The upper portion of the vaginal cervix was not invaded The choice between amputation of the cervix and hysterectomy was left to the patient after full explanation of the dangers and results of the two procedures She decided to have the latter operation, which was performed on February 25, 1887

The uterus was easily drawn down to the vulvar orifice and freed from its vaginal attachment with the scissors The bladder was uncommonly closely attached to the uterus, and before its complete separation was accomplished it was opened The opening into the Douglas cul de sac was easily effected and the fundus rocked backward through the sacral hollow, down and out through the vulva The broad ligaments were secured with silk ligatures and the uterus removed after its separation from them The ovaries were separately removed immediately afterwards In closing the vesical rent the left broad ligament shed its ligatures and bled profusely Hæmorrhage was soon checked The vagina was closed from before backwards, the ligatures were brought down into the vagina, and the latter organ was filled with iodoform gauze

The patient rallied well The temperature rose to 100° on the second and third days Thereafter nothing worthy of special mention occurred On the tenth day an elastic ligature attached to the patient's left thigh was tied to those protruding from the vagina, and in five days they began to come away and in 48 hours the last one was removed In 36 days she left the hospital

Case 3 —April 13, 1887 Mrs C , æt 49, widow, last confinement 28 years ago, she is still menstruating regularly every three weeks, flowing one week

Six months ago she began to have leucorrhœa and to lose occasional small amounts of blood She has excellent general health She is a good breakfaster, digests well and is a good excreter from the bowels, kidneys and skin She is well nourished, and presents a promising outcome for any surgical ordeal The only thing that one could wish different in her general aspect is a too rapidly acting heart It beats over 90 times per minute and the arterial impulse is persistent She has often seen lateritious deposits in her renal secretion

Examination reveals an epitheliomatous degeneration of the cervix, with about ¼ inch of uninvaded tissue of the cervix between the cancer and the vaginal vault The uterus was about 4 inches deep and it bled freely upon withdrawing the sound The fundus was large and was easily felt through the abdominal wall The uterus was freely movable, indicating the non implication of the lymphatics in the broad ligament The absence of invasion of the vaginal wall and of the circumuterine tissues led to the recommending an operation for the removal of the entire uterus

From April 19 till May 5, the date of the operation, she took cascara daily, and digitalis and acetate of potash The condition of the excretions seemed as nearly perfect as possible prepatory to an operation The patient slept in the hospital the night before the operation, and took the customary general antiseptic bath and had administered several vaginal bichloride douches

Operation —The cervix was drawn into the vulva with two large, lock vulsella forceps while the vaginal attachment to the cervix was divided with the scissors Gradually and patiently the circumcervical tissues and the attachments of the bladder and rectum were crowded away with the finger nail till the Douglas cul de sac could be opened Then it was found quite impossible to reach the top of the fundus with the fingers The cul de sac of peritoneum between the bladder and the uterus was then opened, with hope of being able to retroflex the uterus by means of the fingers placed before and behind the uterus This manœuvre was found likewise to be an impossibility After repeated vain attempts to reach the top of the fundus with the fingers, that method was abandoned Trial of very deep suprapubic pressure to thrust the fundus back toward the sacral hollow, and at the same time of grasping and pulling down the fundus with a small vulsellum forceps thrust through the Douglas cul de sac, at last succeeded, after three or four tearings out of the forceps, in getting the top of the uterus out into the world

Snap forceps were then placed on the broad ligaments and the latter divided The subsequent dressing consisted in tucking a thin layer of iodoform gauze into the vagina, care being taken to avoid separating the top of the vaginal walls The danger of this separation must be patent to any observer Ribollet attributes the death of one of his patients to crowding too much gauze into the upper vagina

No stitches were used to close the upper end of the vagina Its borders were permitted to collapse and to close in any position that they chanced to occupy The fear that the bowels and omentum might seek an outlet through the vaginal tract is wholly groundless One ligature was used for a vaginal artery No attention was paid to it in the final dressing The ovaries were both removed after the uterus was finally separated from its attachments

The patient reacted well from the shock of the operation, which consumed seventy-five minutes Her daily progress was so uniformly satisfactory that any detailed descriptive statement of it would be monotony itself The pulse ranged from 90 to 120 beats per minute, it was 98 when she left the hospital The temperature reached 100° one *morning* only, and on five evenings, from third to the seventh days inclusive

The amount of urine passed daily during the first fourteen days after the operation is indicated by ounces in the following figures 19, 19½, 25, 23, 26, 24, 23½, 25, 30, 31½, 34, 40, 35 and 26½

The forceps, one pair on each ligamentum latum, were removed at the end of 48 hours Although anyone knows that 48 hours of obliteration of the lumen of an artery must necessarily destroy its patency, yet the writer was filled with misgivings when the forceps were very carefully unsnapped and as carefully removed as gentleness itself could supervise The folds and creases of the vagina, as far up into the shapeless excavation as vision could peer upon an exaggerated separation of the vulva with the fingers, were watched with an intensity of eagerness and anxiety, for their being inundated with the hot scarlet blood that so easily comes from the ovarian and uterine arteries, that can be appreciated only by him who has experienced those emotions No bleeding followed the removal of pressure from the uterine ligaments The vagina was not again filled with gauze Iodoform was blown into this cavern as far as was possible daily

It was impossible to state definitely the amount of drainage that escaped Perhaps 3 tablespoonfuls daily for the first two days would cover it, afterwards the amount could not have been more than 1 tablespoonful on the third and fourth days each After the fourth day none escaped to mention

Case 4 came to me in Oct, 1887, for an incoercible hæmorrhage from a small fibroid tumor in the posterior uterine wall The patient, a woman 47 years of age, has borne eleven children, and has been having hæmorrhage for eleven years Everything in the way of medicine has been tried, the uterus has been curetted upon two different occasions, and she came to me supposing the ovaries must be taken out I explained to her that I had had two cases of removal of the ovaries for hæmorrhage, but that the operation had not cured the hæmorrhage I also explained to her the danger of removal of the uterus and she consented to the operation The steps were simplicity itself, being a repetition of what I have given The cervix was easily drawn down to the vulvar orifice and the cervical attachments freed at once as speedily as possible An incision was made in the cul de-sac of Douglas and I was able with a knife to divide the tissues without any trouble I kept as close to the uterus as I could, and did not open the bladder When the two broad ligaments were all that supported the uterus they were secured with long snap forceps, and the broad ligament divided on the right and left sides Snap forceps were put on the neighboring deep vessels, that was all the hæmostatic means that was resorted to from beginning to end

The patient was put to bed about 3 o'clock, and about 6 I was telephoned that she was having a severe hæmorrhage Concluding that it was one of the arterial branches from the vagina, I hoped that ergot would stop the hæmorrhage When I reached the hospital I found that after the use of the rectal injection of ergot the hæmorrhage ceased The case ran along very well for 48 hours, afterwards the temperature was 99° for two or three days and then it ran up to 101° She was put upon the table and the wound exposed with a Sims speculum Up in each angle or cornu of the wound was a black gangrenous-looking mass about as big as my little finger, hanging down upon the vagina, which mass protruded from a little cavity filled with the débris of blood, which had probably been produced by the hæmorrhage on the day of the operation It had decomposed and was smelling very badly That mass was pulled out In the other side I was able to pass the forceps up a distance of about 1½ inch I removed all of the shreds and put the patient to bed The temperature at once went down to 98 2°, and since that time everything has progressed satisfactorily This is the twenty first day since the operation I saw the patient this afternoon, and she calls for solid food and is to sit up to morrow The following are some points of interest concerning this operation

1 *Indications for its Performance*—(a) Ten years ago, and indeed until quite recently, the chief indication for the performance of vaginal hysterectomy was malignant disease At present it is agreed by all operators that the earlier it is performed for cancer the greater are the chances for its non-recurrence This dread malady always returns sooner or later after amputation of the uterine cervix, and of course proves fatal, whereas, when the whole organ is removed, the patient is given the only hope of a permanent recovery Hysterectomy does not always prevent recurrence of the development of this neoplasm, yet it offers the best results Martin reports 8 cases of hysterectomy from cancer without relapse, varying from two and one-half to five years According to Sanger the average of survival after this operation is eleven months Olshausen reports cases after operation of relapse, once after eighteen months, twice after two years, and twice after three years

The most favorable conditions offered for hysterectomy are the non-involvement of the vagina, and complete mobility of the uterus, which shows the non-invasion of the *ligamenta lata* In other words, the earlier in the disease the operation can be performed the better are the promises of a radical cure Only too often does it occur that the disease

has advanced too far before the gynecologist is consulted

(b) *Procidentia uteri* is another condition for which this operation is performed Amplastic operations do not always restore the organ to its normal level Artificial vaginal stenosis to the extent of the non-admission of the little finger has failed ultimately to relieve the procidentia through gradual dilatation of the vaginal channel

(c) Fibrous bodies of the uterus which offer the point of departure for serious irregularities have constituted a cause for vaginal hysterectomy Of course reference is had to small tumors Heydenreich reports four cases of operation with four successes He[1] considers that at present it is impossible to pronounce upon the relative merits of vaginal hysterectomy and of castration for small fibrous bodies in the uterus Péan[2] recently reports a case of the same operation for multiple fibroids

(d) The hystero neuroses (inveterate dysmenorrhœa, neuralgia, convulsions, etc), for which oophorectomy is so often performed, Péan considers a justifiable cause for this surgical procedure His reasoning is, that these neuroses sustain an intimate relation to the uterus itself, consequently the uterus should be included along with the tubes and ovaries (Caldwell Paris Letter in *Chicago Med Jour and Examiner*, February, 1887)

As an illustration of the *furor operativus*, a recent article from the pen of a Cologne surgeon, Dr Frank, may be mentioned, which is published in the April 3, 1887, number of the *Archiv für Gynäkologie*, it enumerates the following cases of removal of the entire uterus For endometritis, four cases, for retroflexion or retroversion with fixation, three cases, *pruritus uterinus*, once, and for neuralgia and retention of urine, one case The members of the medical profession can scarcely read the account of these cases without being astounded at the amazing temerity of such proceedings

The various steps in the operation consist in, 1 freeing the cervix from its attachments, 2 hæmostasis and 3 the subsequent dressing

1 The cervix must be drawn down with forceps into the vulvar orifice if possible and the vaginal attachment severed with any cutting instrument, a bistoury, a blunt or a sharp-pointed scissors Some operators prefer one instrument, others another It is a trifling choice to make between them The vulva should be held open laterally by retractors deftly held just within the ostium, if they are thrust into the vagina too far they prevent the forced descent of the uterus If they are wide enough a perineal retractor is unnecessary Just before making the initial cutting it is well to push up the cervix (which has been drawn down) to its natural level and mark with the eye where the vagina is attached, and then draw down the organ and begin proceedings This point is rather important because no one can tell where the vaginal wall terminates and the cervical covering begins, and one is invariably inclined to begin the denudation too far away from the cervix and thus to open the bladder The encircling of the cervix can be made at once with tissues pushed away from the uterus in all directions till the broad ligaments are reached, when they will of course not be disturbed The gravest necessity exists for keeping exceedingly close to the cervix anteriorily, otherwise the operator will find that he has opened the bladder almost before he has any idea that he is dangerously near it By keeping as closely to the cervix as possible another important, nay vital, advantage will be gained, viz the avoidance of wounding the ureter, which perforates the bladder just above the middle of the anterior vaginal wall Wounding this duct complicates matters most wofully in that it necessitates the extirpation of the kidney The surest way of determining the dangerous proximity to the ureter is to discover the pulsation of its accompanying artery which is a branch of the uterine artery and is of considerable magnitude Absolute safety from wounding this important channel is guaranteed to him only who keeps closely enough to the cervix in its denudation Very soon the finger can be made to penetrate the peritoneal cavity as will be indicated by its feeling the fundus covered with the smooth, glistening peritoneum The freeing the posterior cervical wall should be prosecuted with the same care to remain close to the uterus and thus avoid opening the rectum The finger easily penetrates the Douglas cul de sac and the body of the uterus can then be explored readily Up to this point, when the peritoneal cavity is opened the bleeding is considerable though not at all alarming It is best to proceed as rapidly as possible and not to attempt to check hæmorrhage Occasionally the peritoneum is tough and cannot be perforated by the finger, then a blunt pointed pair of scissors, *closed*, can be thrust into this cavity, quickly opened and withdrawn, leaving an opening large enough to admit the finger

After opening the posterior cul de sac some operators push a soft sponge into the peritoneal cavity to remain there till the operation is terminated, for the purpose of preventing the entrance of noxious matters and of keeping the bowels up and away from possible injury It also serves the purpose upon its withdrawal of drawing down the ragged edges of the peritoneum so that in the wound peritoneum lies apposed to peritoneum, a most desirable position to be secured

At this point two proceedings lie open one is to bring the fundus down through anterior cul de sac or through posterior cul de sac—*i e*, to acutely and completely flex the uterus—and the other is, to let flexion entirely alone and to proceed at once with the treatment of the *ligamenta lata* with reference to preventing other vessels from bleeding and dividing them, and thus freeing the uterus wholly from the body Another plan resorted to before removing the organ has been, after securing the broad ligaments, to bisect the uterus from fundus to os, and to remove each half separately It must be a very exceptional case demanding this proceeding When the uterus is small flexion is an easy matter When large it is a very difficult matter, and when very large it is a feat impossible to accomplish

[1] Albert Heydenreich De l'hysterectomie Vaginale Semaine Méd, Paris 1886 vi 69 70

[2] Gazette des Hôpitaux October 12, 1886, pp 950 951

C Staude[1] recommends opening the Douglas' cul-de sac first and retroflexing the uterus completely before opening the vesico uterine cul de-sac, in order not to permit the cancerous cervix to enter the peritoneal cavity as the fundus is brought downwards The ante uterine peritoneal space thus shut off will effectually prevent the cervix entering it However, with the cervix firmly held by the vulsellum forceps it is impossible for it to ascend into the peritoneal cavity as the fundus is brought down Furthermore, if the ante uterine peritoneal space be not opened the work of securing the lateral vesicular supply must be greatly embarrassed, and the danger of wounding the ureters greatly, almost infinitely, increased

The second step in the operation consists in hæmostasis and it includes securing and dividing the broad ligaments

The devices that have been used to secure hæmastasis are almost legion Until very recently silk ligatures only were used to secure the whole mass of the ligaments or to secure it in separate divisions by the continuous or by the loop method Later the ecraséur, wire or the elastic ligature has been used The cautery has been used A separate catgut ligature for each tube has been recommended Needles with a great variety of curves have been devised The application of ligatures is attended with much difficulty, often failing in the most skilled hands

By far the best method of accomplishing hæmostasis is the snap forceps It is a sure method, it abreviates the operation and affords, additionally, perfect drainage Before using them it is always well to test the ratchet and ascertain whether they will hold permanently Occasionally forceps will unsnap and a greater calamity cannot befall an operator than to have that occur after leaving the patient Tieing the forceps together when in doubt about their reliability can be done

After the peritoneal cavity before and behind the uterus has been opened and the uterus has been completely flexed, when possible, and is retained by the *ligamenta lata* only, the latter are ready to receive the forcipressure With the forefinger of the left hand hooked over the superior margin of the left broad ligament the right hand can adjust the forceps to compress the whole width of the ligament and tighten the instrument to the last notch It is best to attach it as near to the uterus as possible and yet permit room for dividing the ligament easily at its uterine end While adjusting the forceps it is of course scarcely necessary to mention the desirability of not including in them a bit of omentum or a piece of intestine I know of no greater satisfaction in gynecological operations that the operator can experience than in tightening hæmostatic forceps on a broad ligament—a satisfaction greatly intensified when one has previously had the appalling accident occur of the shedding of the silk ligatures after the broad ligament has been permitted to contract and withdraw into the pelvis up out of sight

When the uterus cannot be flexed, the forceps have to be applied in the best way that can be devised With a much enlarged uterus the forceps can be applied to include broad ligament to the extent of the width of its jaws, that amount of ligament can be divided and up through the divided segment another pair of forceps can be pushed to include the remainder of the ligament, which in turn can be divided When the finger cannot reach the superior margin of the ligament, the lower section of each ligament can be seized and divided, when it will be found that the whole organ can be made to descend and thus the entire ligament upon each side can be divided When this procedure is necessary the difficulty of practicing it is greatly increased because of the narrowing of the vaginal space

After removing the uterus the parts should be allowed to retract in order to allow any vessels to bleed that are prevented from it by their traction By this means arterial twigs are often discovered which otherwise escape detection All further arresting of hæmorrhages can be accomplished easily with forceps This step in the operation is of vast importance, since hæmorrhage can not only result fatally, but even when not large it can become the unsuspected cause of a fatal peritonitis

The last step of the operation concerns the management of the womb The most elaborate sewing and draining of the vaginal cavity have been resorted to Stitching the peritoneum to the vaginal wall is regarded necessary by some operators One operator recently stated in his report of a case, that he stitched these two tissues throughout in order to prevent vaginal wall hæmorrhage Stitching the anterior marginal border of the rent to the posterior border and drawing the ends of the ligatures out through their centre have been very commonly done Running a purse string suture around the top of the vagina with a piece of rubber draining tube and the ligatures passing through the middle of the puckering has been used

Sewing up the vagina is wholly unnecessary in most cases These various closings of the vagina have been regarded as essential to keep back the bowels and to prevent septicæmia through the vagina Of the former there is a minimum danger When the operation is completed the superior vaginal opening collapses as thoroughly and completely as the *ostium vagina* closes The oozing opposed surfaces at once interdigitate and inaugurate the preliminary processes of union They do not lie idle for 24 or 48 hours before commencing union is set up At the end of 48 hours the top of the vagina is all closed to the passage of fluids excepting through that portion of it occupied by the means of drainage

The use of iodoform gauze in the vagina is of the utmost importance and when wrongly used is a source of danger The vagina must be absolutely aseptic, and herein the gauze filled with iodoform becomes of such great service Stuffing the vagina too full of this agent keeps apart the walls of the top of the vagina and prevents their union

1634 Michigan Avenue

[1] Deutsche med Wochenschrift Berlin 1886 xii, 602 604

A CASE OF CHRONIC PANCREATITIS, WITH SYMPTOMS RESEMBLING MALIGNANT DISEASE

Read before the Section for Clinical Medicine, Pathology, and Hygiene, of the Suffolk District Medical Society, November 9, 1887

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OF BOSTON.

Mrs B., age 62, widow, was first seen February 24, 1886. She was of medium height and weight, her skin was sallow, and her countenance haggard and anxious. Her habits of life were regular, and her hygienic surroundings good. She said she had been well till within the past three or four months, but more searching inquiry showed that her appetite had been very capricious for a number of years, and that during the last year she had lost strength and a moderate amount of flesh. Her diet had been mostly of the saccharine and starchy foods, as she had always disliked meat. For the past few months physical exertion of any kind had tired her out of due proportion, and during the last few weeks even moderate exercise had been followed by breathlessness and beating in the arteries of the neck. There was complete anorexia, and the bowels were very constipated.

The physical examination was as follows. Skin, a muddy yellow, tongue, rough, slightly coated, lungs, normal, heart, normal in size and position, moderate blowing murmur throughout the cardiac area, most marked over the base, abdomen, normally resonant, liver dulness normal, no increased spleen dulness, pelvic organs, normal, urine normal.

In consequence of the negative result of the examination, the case was regarded as one of profound anæmia, and the treatment was directed toward regulating the bowels and assisting nutrition by easily digestible food and some of the most assimilable forms of iron.

The gravity of the symptoms increased rapidly, the simple act of rising from her chair caused dyspnœa, food of all kinds was very repugnant, the skin grew more sallow and the feet œdematous. She vomited occasionally, especially after any unusual movement. Temperature 100°, pulse weak, 90 to 100. This rapid change for the worse made me feel that the case must be either one of pernicious anæmia or some concealed organic disease, and I therefore asked for a consultation.

Dr R. T. Edes saw the patient with me, March 16. He did not thing the anæmia profound enough to warrant a diagnosis of pernicious anæmia, but as he could find no proof of organic disease, he advised full doses of liq. pot. arsen., and gave a very guarded prognosis. A microscopical examination of the blood showed the red corpuscles notably diminished. No increase of white corpuscles, and none of those irregular forms of red corpuscles characteristic of pernicious anæmia. The patient was kept in bed and fed *per rectum* as well as by mouth.

She improved for a time under this regimen, the dyspnœa becoming less troublesome, so that during part of April and May she was able to go down stairs, and to ride out occasionally. In fact, the dyspnœa did not trouble her again to any amount till just before her death. I never felt, however, that the improvement was permanent, for her color remained bad, and she did not gain flesh nor appetite.

Early in July she complained of fluttering in the epigastrium, and her distaste for food was so great that only the force of a strong will enabled her to eat or drink. The abdomen was again examined, slight increase in liver dulness was noted.

On August 16, she had a sharp attack of hepatic colic followed by intense jaundice, and so much nausea that she was fed entirely by rectum for five days. She rallied very slowly and now began to lose flesh quite rapidly.

On October 14, she had another attack of hepatic colic, and passed a gall-stone the size of a pea. After this the signs of digestive disturbance were more marked. She complained constantly of a burning pain under the lower end of the sternum coming on about two hours after eating. She also complained of a feeling of weight in the bowels when she sat up, as if some heavy body were dragging from the spine. As she was certainly the least nervous or imaginative person that I ever met, these symptoms deserve more attention than they would in ordinary cases.

The bowels were either constipated or relaxed. The stools varied, being sometimes perfectly normal in appearance, sometimes sticky and putty-like, sometimes gray in color, often they contained undigested food. Throughout her illness every stool was examined by her daughter, an unusually intelligent lady, and I saw many of them myself, but never could see or hear of any of the fatty stools considered to be characteristic of pancreatic disease.

Early in February, she began to vomit irregularly and complained constantly of distress after eating. She never had another paroxysm of hepatic colic, but she grew deeply jaundiced, vomited constantly for five days, the feet and limbs became œdematous, the pulse rose to 120, and death seemed imminent. During all this time no tumor of any kind could be felt in the abdomen, nor was there any tenderness nor tympanites except just after the attacks of colic. It seemed to me, however, that there must be some disease, probably malignant, in the region of the duodenum, liver or head of the pancreas, but wishing to get all the light that greater experience could give, I asked Dr M. Wyman to see her with me. Dr. Wyman thought the case was either one of pernicious anæmia or malignant disease, probably the latter.

The vomiting gradually ceased and she rallied slightly again, and from this time, January 4, till her death, February 14, it did not recur to any extent. She now began to suffer from what she called "nervous twitches." She insisted that she had no pain, but she lay as if prostrated, moaning with every breath, her features pinched and deathly pale. In fact, her appearance was exactly as when she was suffering from hepatic colic, except that there was constant twitching of the feet and legs, and oc-

casionally of the arms These movements were to a certain extent, but not entirely, under the control of the will The attacks came on at first only occasionally, but they grew more and more frequent, until during the last two weeks of her life, it was necessary to keep her constantly under the influence of sedatives to give her any rest from them She grew gradually weaker, and died February 14

Autopsy, twenty-six hours after death Rigor mortis well marked Skin a dirty yellow Body and limbs much emaciated Owing to circumstances which so often hamper the performance of autopsies in private families, I was only able to examine the abdominal cavity

The muscular layer of the abdomen was very thin The abdominal cavity contained a small amount of clear serum The intestines looked very anæmic The small intestines were contracted, the large intestines unusually long and somewhat distended, the walls in some places so thin as to appear almost transparent No trace of peritoneal adhesion or inflammation

Liver slightly enlarged, rather pale, yellowish, surface perfectly smooth, but rather firm in texture

Gall-bladder the size of a large pear containing three large and many small gall stones Bile very dark and viscid

Stomach empty Walls very thin, not the slightest appearance of malignant disease in the stomach or duodenum Upon raising the stomach the pancreas was seen, larger than normal, dark gray in color, and so firmly adherent to the vertebræ and posterior abdominal walls that it was detached with great difficulty The attachment to the duodenum was also over a larger surface than usual, the gastro splenic omentum much thickened Upon removing the pancreas, it looked so large and firm that I felt assured that there must be a deposit of cancer in the head, and that the diagnosis of malignant disease was correct The specimen was placed in alcohol for further examination, but it was found impossible to harden it, in fact, it grew softer, and large quantities of fat seemed to have been dissolved out by the alcohol and floated upon the surface A microscopical examination, in which I was kindly assisted by Dr Blodgett, showed a large increase of connective tissue, an abundant deposit of pigment, with very little trace of acini or glandular epithelium, a considerable amount of fatty degeneration The specimen gives a very poor idea of its appearance when removed from the body Its size has diminished at least one-half, by its seven months' immersion in alcohol, while the texture is softer and more friable The portion of duodenum attached shows the opening of the ductus communis and the canal of Wirsung The gall ducts are very much dilated The opening of the portal vein is seen toward the head, while the superior mesenteric artery runs along its posterior surface, and the splenic along its upper border

I bring the case before the Society as one of pancreatic disease, although I am quite aware that it may be an open question how far the condition of the pancreas was answerable for the symptoms There is so little known of the pathology of this organ, that it seems right that every case in which an abnormal condition is found, should be recorded Almost all reported cases are those of carcinoma, in which it is very difficult to separate the symptoms common to many carcinomatous growths from those due to injury of the gland Moreover, in most of these cases the disease has extended before death to neighboring organs

Experiments of removing or destroying the pancreas in animals, show diverse results While in some, rapid emaciation, fatty diarrhœa, and death from inanition, rapidly follows, in others the pancreatic secretion seems to be replaced by some other digestive fluid, so that the nutrition of the animal suffers very little This is notably the case in the experiments lately published by Senn in his articles on "Surgery of the Pancreas "

The chief symptoms supposed to indicate pancreatic disease are rapid emaciation, jaundice, diarrhœa and constipation, fatty stools and cœliac neuralgia, but no one of these symptoms seems to be invariably present, and only one, the fatty stools, pathognomonic In about twenty five cases which I have been able to collect, of disease of the pancreas, mostly malignant, in only two were the fatty stools prominent, though doubtless in many search for them was not made, as the disease was not diagnosed before death

A symptom mentioned by Friedreich in "Ziemssen's Handbook," and by Starr in "Pepper's System of Medicine," is a feeling of weight in the epigastrium, particularly on assuming the erect position, as if a heavy body were pulling from the spine This symptom was constantly complained of by my patient, so long as she was able to sit up I cannot help thinking that the paroxysms of nervous distress which were the cause of so much suffering to her, were some form of nervous disturbance produced by pressure on the nerve structures surrounding the pancreas, and were analogous to the attacks of cœliac neuralgia mentioned by many authors

Although all writers on pancreatic disease describe a chronic hyperplasia of the connective tissue of the pancreas as one of its diseases, I can find the record of only one case which seems somewhat similar to the one I have here described This was reported by Dr Tyson in the *Philadelphia Medical Times* in 1882 The case was that of a lady 68 years old, who had always been well until an attack of pneumonia in February, 1880 From this time she had more or less disturbance of the bowels In July, 1881, she was seized with severe diarrhœa and clay colored stools This was quite persistent, and accompanied by irregular distension of the abdomen, apparently from areas of flatus Later, a small indistinct lump was discovered below the umbilicus and to the left The diarrhœa continued and the stools were distinctly fatty She emaciated rapidly, and died March, 1882

At the autopsy, the lump had disappeared behind the stomach, but was found to be the head of the pancreas, which was unusually resisting but not much enlarged Upon examination the secreting

structure of the pancreas was found to be nearly all atrophied and its place occupied by a fibrous tissue In this case, also, the organ was so much shrunken and altered by the preserving fluid as to present a far less striking appearance than when removed from the body

But in addition to the condition of the pancreas itself, I wish to call your attention to the parts surrounding it, as it seems to me that we may find there an explanation of some of the symptoms not otherwise accounted for The adhesions between the head of the pancreas and the vertebral column were so firm that I was obliged literally to dig the gland out of its bed The connective tissue seemed almost leathery in its toughness and resistance

You will remember that the coeliac axis gives off its branches just at the upper border of the pancreas, the semilunar ganglia of the solar plexus lie partially behind the gland, while the superior mesenteric is given off from the aorta just at its lower border In this case, as will be seen by the specimen, the superior mesenteric is given off above the pancreas and runs across its whole posterior surface, and therefore could hardly fail to be compressed between it and the spine, where the adhesions were so firm as in this case Even a moderate amount of compression on the artery supplying the whole of the small intestines would probably modify their nutrition and render their digestive fluids unable to supply the want of pancreatic secretion, as it probably does in some cases The semilunar ganglia would be even more easily compressed than the arteries Since they are the sympathetic nerve centres which modify the nutrition of all the organs of digestion, any injury to them would probable affect the proper performance of the function of those organs

There is no doubt that the attacks of hepatic colic were instrumental in hastening the fatal termination of the case

I suppose it may be asked whether this was not really a case of pernicious anæmia and the condition of the pancreas, etc , only a secondary result of the anæmia, instead of being its cause Against this speaks the age of the patient, her comfortable circumstances and regular life, the high degree of emaciation, the absence of fever, and the fact that at the autopsy the organs, though anæmic, had not that absolutely blanched appearance described as characteristic of pernicious anæmia

I hope, however, that those who have had more experience than I have in this disease will give the Society the benefit of their opinion on the question

MEDICAL PROGRESS.

SURGICAL TUBERCULOSIS —(See the numbers of THE JOURNAL for Oct 29, Nov 5, 12, 19, 26, Dec 3, 10 and 17)

45 Not without consideration for surgery is the question, in how far does tuberculosis of itself cause suppuration, and in how far are the softening and suppuration of tuberculous foci favored by the entrance of septic material, that finds a suitable soil in the dead tissue masses of such foci?

The regularity of softening and ulceration in the tuberculous conditions of the respiratory and intestinal tracts, contrary to the extraordinary frequency with which tuberculosis of bones and joints heals without suppuration, or at least exists for as much as a year without suppurating, is very striking The older authors often asserted that high fever accelerated the softening of the tubercle

46 With regard to the localization of the foci in the different organs, regions of the body and tissues, tuberculosis shows the greatest difference in children and adults, and in regard to the curability and the danger to life, exact statistics on this point are desirable It is well known that spina ventosa occurs only in small children, and tuberculosis of the shoulder joint almost exclusively in adults, and the tuberculous suppuration of the knee joint, running a very torpid course, is found almost exclusively in the latter

In children the process of cure is very much more ready than in adults Tuberculous diseases also recede without suppuration very much more frequently in children Even the most severe tuberculous bone and joint affections, complicated with the most extensive disturbances, may heal spontaneously in children Here conservative surgery has made a great field, while in similar cases in adults a cure can be obtained only by removal of the diseased portion, and often only by amputation Tuberculous bone and joint affections in children are easily self circumscribed The diffuse suppuration of the whole carpus, as frequently occurs in adults, especially in elder persons, is scarcely ever seen in children And when a rather rare case of suppurating tuberculosis of the carpus is seen in a child, the process remains limited to that joint All the cases that I have seen in younger children were cured by drainage and scraping Similar conditions prevail in the foot From puberty onwards the prognosis becomes gradually worse The cases become more numerous in which conservative principles cannot be applied

Tuberculous focal affections of external organs combined with tuberculosis of the lungs are very much less frequent in children than in adults In a somewhat old person, that has, for example, caries of the wrist, it is an exception that he has not already or soon will have tuberculosis of the lungs

47 The battle as to the identity of tuberculosis and scrofula is still being fought It must be first settled what forms of the lighter so called scrofulous affections are produced by the tubercle bacillus In a case of eczema of the arm that, I believe, every dermatologist had diagnosticated as eczema, and which I examined only because scrofulous softened cubital glands were present, I found tubercle bacilli in the eczematous masses of epidermis scraped off

We must next find out in how far chronic inflammations, hyperplasias, and especially tissue changes that offer a favorable soil for the tuberculous virus, are caused by scrofula It seems that such a relation is proved by the lymphatics

Finally, it must not be overlooked that in the dispute as to the identity of scrofula and tuberculosis the question is often placed improperly and illogically Tuberculosis one generally thinks of as a local process, and scrofula more as a certain unknown constitutional and nutritive anomaly, as a special disposition, diathesis, as an hereditary predisposition, which in great part coincides with what is taken for tuberculosis

A person that shows not the slightest local change and no deviation from the normal on the most rigid examination of his organs we say is not tuberculous, but we reckon as scrofulous a now blooming and completely healthy child that has already gone through a series of affections that we call scrofulosis And we would perhaps even call it scrofulous if only a part of his relatives had suffered from scrofulous affections, and tuberculosis was in his own family and house

48 It cannot be doubted that certain drugs applied locally to tuberculously diseased tissue exert a curative, and perhaps even a specific influence The favorable action of preparations of mercury on lupus, for example, is not to be disputed Still, opinions differ very widely, and a further and comparatively test of such drugs is very much to be desired With the preparations of mercury may be mentioned especially iodoform, iodine, arsenic, lactic acid, etc What has been said applies with still more force to the internal use of such drugs —*Langenbeck's Archiv*, Bd 33, Hft I

USTILAGO MAYDIS AS AN OXYTOXIC —DR W A N DORLAND, of the Philadelphia Hospital, after a study of ustilago maydis, summarizes as follows

1 *The toxicology and physiological action of the drug*—No cases of poisoning in man by the drug are on record That it is, however, possessed of toxic properties in large doses has been proved by Mitchell He found that in the lower animals, in large doses, it acted violently upon the spinal cord, paralyzing first the sensory, later the motor tracts, finally involving the motor and probably also the sensory nerves Like ergot, then, it is probable that the chief force of the drug, in toxic doses, is expended upon the nerve centres, producing a toxic paralysis

The action of ustilago upon the uterus has been more carefully noted After the ingestion of a sufficient amount, in from twenty minutes to half an hour, the pains, if present, are increased in severity, in frequency, and in duration, presenting a marked *clonic* character, following each other in frequent succession, with a decided intermission between each In this respect it differs decidedly from the action of ergot, which, in full doses, produces one continuous, *tonic* spasm of the uterine muscle It is this property of ergot which has, when administered before the delivery of the placenta, produced in so many instances the irregular contractions of the uterus, of which the hour-glass is a well known example The employment of ustilago seems to be entirely free from such unpleasant complications In addition to being a valuable adjuvant in stimulating weak uterine contractions, ustilago seems to possess the property, which some years ago was ascribed to quinine, namely of exciting uterine pains when entirely suspended

As to the time required for the action of the drug to become apparent, it may be said that it differs in different cases, depending, undoubtedly, upon the rapidity with which it is absorbed from the gastro-intestinal tract and carried into the system In only two instances did it require over thirty five minutes before the ustilago acted upon the uterine tissues, and in one case most of the drug was ejected by emesis In the remaining seven cases the average time required was twenty five minutes

The effect produced by ustilago upon the other unstriped muscular tissues of the body has not been inquired into Probably it produces the same increase of intestinal peristalsis and the same rise in the arterial pressure due to vaso motor spasm as is produced by ergot This is yet open to investigation

2 *The indications for the employment of the drug* —We shall consider the first indication for its use to be the failure of the pains, with *complete dilatation of the os uteri* In none of the cases was the drug employed until the pains of labor had either become so weak that they were inefficient to accomplish the expulsion of the fœtus, or until they were entirely suspended This, then, we consider the second indication for its use, namely, the *inefficiency or entire suspension of the parturient pain* After the ustilago had been taken, it may also be noticed that in no case was there the slightest tendency toward a post partum hæmorrhage In each case, after the expulsion of the placenta, the uterus remained in a state of firm contraction While, during the three months the great majority of the remaining cases, in which the customary ergot had been employed, showed no tendency whatever toward this alarming accident, however, in two instances was there such an occurrence demanding prompt attention The third indication, then, for the employment of ustilago we shall consider to be *a condition of uterine inertia threatening or producing post partum hæmorrhage*

3 *The dose and mode of administration* —The preparation of ustilago employed in all reported cases, as well as in our own, was a good fluid extract The dose of this varies from one half to two drachms, one drachm being a fair average This may be repeated at intervals as required Should it be necessary, it may be used hypodermatically in doses of from five to fifteen minims

Finally *The advantages of ustilago over ergot* — The employment of ustilago seems much to be preferred to that of ergot It does not produce irregular contractions with all the consequent complications and sequelæ, containing but 2½ per cent of fixed oil, while ergot contains from 25 per cent to 28 per cent, the dangers of absorption are reduced to a minimum, and finally, as it can be procured at a cost of 50 per cent less than that of ergot, it seems to be on a fair highway toward the supplanting of the latter in obstetrical practice, should the results of the investigations thus far be confirmed by subsequent researches —*Medical News*, Nov 5, 1887

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor

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MEDICAL LEGISLATION AND THE STANDARD OF GENERAL EDUCATION

In THE JOURNAL of the 17th inst, attention was called to the necessity of securing more uniformity in the laws enacted by the several State Legislatures for the regulation of medical education and practice, and to the fact that a special committee had been appointed by the Section of State Medicine to prepare the draft of a law for that purpose, and report the same to the Section during the next annual meeting of the American Medical Association It was also suggested that any law, to be of real value, must be so framed as to secure the actual accomplishment of three leading objects, namely a fair and creditable standard of general education for the student before being permitted to enter upon the study of medicine, a thorough knowledge of all the recognized branches of medicine, and a competent and impartial tribunal or Board, in each State, to determine by adequate practical tests when the two preceding standards or requirements have been complied with by each individual candidate asking for admission to membership in the medical profession Fair investigation will show that no law can be framed, the execution of which will materially improve the education and usefulness of the medical profession, unless its provisions are such as shall establish and enforce a standard of education as a prerequisite to the study of medicine embracing, in addition to the ordinary elementary branches, at least a thorough knowledge of mathematics, physics, the natural sciences and English literature

The law, to be of value, must not only specify plainly the minimum requirements for commencing the study of medicine, but it must provide the tribunal in each State whose duty it shall be to examine and register all persons proposing to commence the study of medicine, and to issue certificates to those only who are found qualified in accordance with the standard given in the law, and no *time* shall be allowed as having been spent in pursuing medical studies until such registration and certificate has been obtained To accomplish this does not necessitate a multiplication of State Examining Boards The same Board that decides the qualifications of the students in medicine and awards to them the license to practice, should also examine and decide upon the preliminary qualifications of those proposing to study medicine If it be said that the requirement compelling every person proposing to study medicine to spend the time and money necessary to demonstrate to a State Board of Examiners his fitness for entering upon the important field of professional study, would deter many from making the attempt, the obvious answer is, so much the better for all the parties interested Better for the individual to be thus stopped at the threshold and turned into some vocation better suited to his capacities, than to pass him through the door without a question and permit him to spend three years of valuable time, with several hundreds of dollars, and then reject him, or, still worse, pass him through the second door into the ranks of a profession already crowded to excess, where little else than a life of disappointment and poverty awaits him Better, far better also would it be, for both the profession and the community, if such a reasonable barrier were interposed where the first step towards professional study is to be taken

It would be the most effectual mode of compelling all parties to recognize the fact that the successful study and practice of medicine actually requires a preparatory mental discipline that can be acquired only by a fair general education It would not only materially lessen the number entering upon the study of medicine and thereby aid in lessening the evil of overcrowding the professional ranks, but it would do it by turning aside the very class whose free admission heretofore has done more to lower the standing and usefulness of the profession than any other influence that could be named There has been manifest a somewhat persistent disposition to hold the medical colleges responsible for the proper preparatory education of the students they admit to their halls Experience, however, long since demonstrated its impracticability It is true that we have several medical colleges, chiefly connected with established universities, the faculties of which have faithfully

endeavored to maintain some standard of preliminary education as a condition for admission to their instruction, and these will continue to do so, while they see year after year the same persons whom they have refused matriculation, go directly into other colleges where no preliminary questions are asked A very few years since the Illinois State Board of Health gave notice that it would not recognize any medical college as in "good standing" that did not require a certain standard of preliminary education nor issue a license to practice in that State to any one founded on the diploma of such college In consequence a large number of colleges inserted a paragraph in their next annual announcement stating that the proposed standard of preliminary education would be required, and thus retained their "good standing" with the Illinois State Board But practically the clause thus inserted had the same kind of influence, though less durable, on the educational qualifications of the students admitted to the colleges, that the fence-post, clothed with an old coat and hat, does for a "scare-crow" in the farmer's cornfield It frightened a few of the more timid away for the first year, until they had time, by correspondence or by the names of acquaintances they saw in the list of students contained in the next announcement, to learn that the preliminary examinations were of such a character that "no applicant had yet failed to pass " If any of our readers are inclined to place value on the preliminary requirements of such colleges as have been induced to insert the clause relating thereto in the annual announcement in obedience to the demands of the Illinois State Board of Health, we commend to their perusal the results of the careful and well devised researches of Dr J P Garrish, of Portland, Maine, presented at the last annual meeting of the American Academy of Medicine, and published a few months since in several of the medical journals If we are to have further legislation relating to strictly medical matters, let the profession exert its influence in favor of only such statutory provisions as will prove of substantial benefit in improving the educational status of the profession, and thereby proportionately increasing its usefulness and honor

EYE-TROUBLES AND NERVOUS DISEASE

More and more during the past few years, has the attention of the profession been called to the frequency with which functional or reflex disturbances are caused by disturbances of vision The latest issued contribution to this subject (of any considerable length or pretense) is a work by DR GEORGE T STEVENS, of New York, to which was awarded the prize of the Royal Academy of Belgium in 1883, and that is now presented in the English language The work is based on a large number of cases of nervous disease, both in private and hospital practice The conclusion that he arrived at in his investigations is thus formulated Difficulties attending the functions of accommodating and of adjusting the eyes in the act of vision, or irritations arising from the nerves involved in these processes, are among the most prolific sources of nervous disturbances, and more frequently than other conditions constitute a neuropathic tendency

It will be observed that the proposition is not exclusive, but that it recognizes any and all causes of nervous irritation, and that while the influences indicated by it are held to be pre-eminent, they are not held as being exclusive permanent causes "Let it be remembered," says the author, "that it has been universally conceded that the nature of the neuropathic tendency is unknown If one pre eminently important tendency is here demonstrated, it is not to be rejected because it may not include the whole "

Keeping this in mind, we may now speak of some of the nervous troubles that Dr Stevens has found to originate from ocular disturbances

In regard to these troubles, probably more has been written of *headache* from eye trouble than of any or all other disorders arising from ocular disturbance Dr Stevens cites cases of chronic headache relieved by removal of the irritation caused by 1 Hypermetropia, with insufficiency of the external recti, 2 Astigmatism, with enfeebled adducting force, 3 Enfeebled energy of the muscles of accommodation, 4 Insufficiency of the external recti muscles uncomplicated with any very important refractive error From this it appears that these conditions may act as disposing causes of headache, and that the removal of the irritation caused by such conditions is sufficient to give permanent relief The percentage of chronic headaches permanently relieved was 83 6, improved 12 4, and not cured 4 No cases of simple asthenopia or of temporary headache are included in this analysis In regard to migraine, it is significant that in a few cases in which the fundus of the eye has been examined ophthalmoscopically during the period of visual disturbance, the retina has been found pale and brilliant, the optic disc unusually white, and the main arteries irregularly contracted in their course In these cases the field of vision is more or less contracted Such cases, when dependent upon visual troubles, are

more difficult to relieve, according to Dr Stevens, than ordinary chronic headaches, as there is often a complicated state of refractive trouble and muscular insufficiency, demanding greater care and judgment in correcting the ocular conditions

As concerns the relation of neuralgia to ocular troubles, the author gives an analysis of 100 cases of neuralgia seen by him in fifteen months 12 were not subject to important ocular defects, or were seen only once, 3 would not follow the advice given, of the remainder 83 33 per cent were permanently relieved, 11 76 per cent materially improved, and 4 71 per cent not relieved by correction of the eye troubles On comparing the family history and physical conditions in many hundreds of cases of neuroses, the author concludes that hereditary neuroses are not transmitted from parent to child directly, that they are the manifestations of transmitted physical peculiarities that render difficult the performance of certain important functions, and that of the hereditary physical defects that thus tend to develop neuroses, anomalous conditions of the eyes are among the most frequent and important, and these conclusions are well maintained in regard to neuralgia. The author also gives records of several cases of "spinal irritation" and of neurasthenia cured by correction of ocular troubles

Pye Smith found that of 136 choreic patients at Guy's Hospital, 106 were between the ages of 6 and 15, and 62 of these were between the ages of 6 and 10, so that almost half were at the age when children enter school, and almost all were children of school age Dr Stevens says that his researches show that the majority of cases of chorea occur among children that are hypermetropic Of 118 cases examined in private practice, there was simple hypermetropia in 78, hypermetropic astigmatism in 13, mixed astigmatism in 5, unequal myopia in 6, and myopic astigmatism in 2, and associated with these conditions in a considerable number of cases, there was more or less muscular disability From a careful study of the cases that he has examined, and of the results of treatment of ocular troubles found, the author asserts the direct relationship between these ocular troubles and chorea (more especially chronic chorea, since no conclusions of value could be drawn from a small number of cases of acute chorea, that has a tendency to recover spontaneously in a few weeks) And after reading the records of the five cases given by the author, one is not much inclined to quarrel with the conclusion that chorea is emphatically a nervous trouble depending upon ocular conditions

In regard to the relation of eye trouble to epilepsy the author considers that form of epilepsy only that does not depend upon visible lesions Examinations of ocular conditions were made in 140 cases of epilepsy, 85 of which were in private practice The general result was the finding of refractive anomalies in a considerably larger ratio of cases than was found by Cohn in his examinations of the eyes of school children, in 100 consecutive cases there was hypermetropia (including hypermetrophic astigmatism), in 59 cases, myopia (including myopic astigmatism in 23 cases, and emmetropia, or refractive errors less than 1 D in 18 cases) In four of the cases in which notable errors of refraction were not observed, atrophy of one of the eyes existed "In the greatest number of cases examined in private practice very marked insufficiency of the motor muscles of the eyes was found, and it may be here observed that, so far as ocular irritations are concerned in the origin of a tendency to epilepsy, muscular irregularities are doubtless much more efficient than refractive anomalies The proportion of refractive errors stated above would not of itself prove a relation between the state of the eyes and the epileptic condition, although the proportion is notably in excess of that found by examination of those in health This circumstance, however, taken with that of a state of insufficiency of the ocular muscles existing very generally, renders it probable that the ocular defects may be in relation to the epileptic tendency " This probability becomes an exceedingly strong one when we consider the results of treatment based upon the supposition that epilepsy may be in direct relation to the ocular condition Of the cases seen in private practice 34 only were treated and observed for any length of time beyond one or two visits, 5 withdrew from treatment before obtaining any relief from important ocular defects, and the remaining 29 were treated only by the removal of the ocular defects, 14 of these may be considered well, 2, still under observation when the memoir was written, are believed to be permanently relieved, 3 others still under treatment, have received such marked relief that it is believed that an entire discontinuance of the malady may be expected, 7 have received temporary relief, 2 showed no improvement, and 1 that had shown some improvement, died of accident four months after the first visit The question of the influence of drugs is thrown out in these cases, since some patients had taken none for some time before coming under treatment, and in cases in which drugs were taken up to the time that treatment was begun they were at once discontinued The 12 cases re-

corded by Dr Stevens are exceedingly interesting

It is quite conceivable that disturbances of vision must react upon the mental as well as upon the sensory system Dr Stevens gives details of four cases of mental disorders relieved or cured by correction of visual anomalies Two of these cases are illustrated by photographs, taken before and after correction of the eye trouble, that show more than could possibly be told

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In several hundred of his cases Dr Stevens has made a careful study of the heredity of the patients The list contains consecutive cases of nervous diseases in which the family record was ascertained, and in which refractive errors of 1 D or more, excluding cases of simple myopia, were found, muscular insufficiencies being excluded All the cases were those of adults Most of the deaths in the families of these cases have been from very chronic diseases or from sudden strokes like apoplexy or diseases of the heart In 207 deaths 89 were from phthisis (more than 43 per cent), about 7 per cent died from Bright's disease, and 9 per cent died from paralysis and apoplexy—the usual death rate from these diseases in New York being a little over 24 per cent, about 4 per cent, and 5 per cent respectively From a careful study of these histories it would seem that in families with a high degree of refractive errors there is a great frequency of nervous disorders and organic lesions, of consumption and Bright's disease, and that the higher the grade of refractive anomalies, the greater is the proportion of phthisis and Bright's disease

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AMERICAN RHINOLOGICAL ASSOCIATION —At the last annual meeting of this Association, September, 1887, the following officers were elected for the current year President, Dr C H von Klein, Dayton, Ohio, Vice-Presidents, Drs R S Knode, Fort Wayne, Indiana, and A G Hobbs, Atlanta, Georgia, Secretary and Treasurer, Dr John North, Keokuk, Iowa, Librarian, Dr N R Gordon, Springfield, Illinois The sixth annual meeting will be held in Cincinnati, Ohio, September, 1888

THE CENTRAL WISCONSIN MEDICAL SOCIETY will hold its third quartely meeting in the Capitol, at Madison, December 27th, 1887 A good program of work is offered President, L V Lewis, Secretary, C S Sheldon, of Madison

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COMPLIMENTARY —The well written and valuable work of Dr H Gradle, of Chicago, on "Bacteriology," has attracted attention in Japan, and been translated into the language of that country

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SOCIETY PROCEEDINGS.

OBSTETRICAL SOCIETY OF PHILADELPHIA

Stated Meeting, Thursday, November 3, 1887

THE PRESIDENT, T M DRYSDALE, M D, IN THE CHAIR

DR ROBT H HAMILL reported a case of

PUERPERAL MALARIAL FEVER, SIMULATING SEPSIS

In the *Amer Jour Obst*, April, 1880, Dr Fordyce Barker called attention to a peculiar febrile derangement, known as "puerperal malarial fever" It is of paramount importance to the obstetrician to know whether or not he has to deal with a disease that is the result of carelessness, or one of miasmatic origin The following case, which I wish to add to the list, seemed to be caused by a miasmatic influence, rather than one of septic origin I shall only give the most prominent points in the case, which led me to believe that it was of malarial rather than septicæmic origin The patient was delivered of a premature still born child, labor being complicated by placenta prævia and induced It was reported at the September meeting of the Society Twelve hours after labor had ended the temperature had risen to 101 5° F, but the patient was otherwise in good condition The following day her temperature had fallen one degree In the evening of the third day she had a severe chill lasting fully twenty minutes, and followed by fever and profuse sweating From the fact of labor being complicated as before stated and version having been performed, I very much feared I had a case of sepsis to deal with, but after learning that during her pregnancy she suffered considerably, at times, from an ill defined feeling of lassitude, and "an aching of her whole body," and further, that the street in which she had lived had been in miserable condition, stagnant pools of water being allowed to remain, thus creating a favorable nidus for the germs of malaria, I felt much relieved In addition to this history, and much to my delight, the woman had another severe chill followed by the fever and sweating stages These chills continued occurring daily until the ninth day, decreasing in severity each day At times there was slight delirium Almost from the first the patient was taciturn and later on became very weak, with a feeble rapid pulse There was no pelvic pain or tenderness, and very little if any tympany No odor to the lochia, which was normal in quantity Vagina and appendages perfectly healthy The blood was not examined because quinine had been given from the first Very little change took place in her condition until the seventeenth day, when there was an abatement in all her symptoms, and convalescence was very rapid The treatment

consisted chiefly in the administration of large doses of quinine and stimulants The amount of quinine taken without producing any symptoms of cinchonism was greater than I have ever known In one dose she got 30 grains, followed in two hours by 30 grains more Quinine seemed to have no effect until used in the form of Warburg's tincture, notwithstanding it had been given in one large and in smaller oft repeated doses After the patient began to convalesce she did not have an unfavorable symptom, and is now fully recovered

DR J L LUDLOW spoke of the history of Warburg's tincture and of the difficulty of obtaining a preparation in accordance with the original recipe He had succeeded in having an exact preparation made by a druggist of this city, and it had yielded him results far better than he could obtain with quinine or any other combination of it He had used it at Eddystone with great success

DR DRYSDALE has had wonderful effects from Warburg's tincture

DR B C HIRST on

CATHETERIZATION OF THE URETERS

After seeing the ureteral catheters that were shown by Dr Kelly at the last meeting of the Society, and hearing his commendation of them, a case came under my observation in the Maternity Hospital that seemed eminently suitable for the application of these instruments as an aid in arriving at a correct diagnosis The clinical history of the case is briefly as follows A young prima gravida was found to have both pus and albumin in her urine, which condition persisted after delivery The case was treated as one of cystitis by vesical injections, but without much benefit Some three weeks after the delivery, the quantity of urine excreted in *twenty-four hours* became decidedly lessened, while the amount of pus became both actually and relatively much decreased At the same time the temperature rose to 104° and there was considerable pain over the region of the right kidney This history would, of course, have led one to suspect "lithogenic pyelitis" resulting in the formation of a stone in the pelvis of the right kidney, which had suddenly plugged up the outlet from the kidney and had thus diminished the quantity of urine and decreased the amount of pus An answer to the following questions was desirable 1 Was the *right kidney* chiefly affected, or was the pain on the right side referable to a morbid condition of the left kidney? a possibility to which attention has been called, especially by Knowsley Thornton 2 Were both kidneys diseased or was one healthy? 3 Did the pus really come from the kidneys or was it confined to the bladder? I was able to solve these problems by the use of the ureteral catheters which Dr Kelly was kind enough to lend me The ureters were made out without difficulty by abdominal palpation, and the catheters, first the metal and then the flexible, were introduced with ease, the flexible catheter being pushed up the right ureter a distance of 8½ inches The specimens of urine collected in separate test tubes from each kidney showed, on inspection, a much greater turbidity in that from the right than in that from the left kidney A microscopic examination revealed pus in both specimens, but in that from the right side in much larger amounts than in the specimen from the left kidney In the urine from the left side a well defined granular cast was found I can say, then, 1, that the pus came from the kidneys, 2, that both kidneys are diseased, but the right is most markedly affected, 3, that there is not only pyelitis, but pyelo nephritis in the left kidney, arriving thus at a precision in diagnosis that would be impossible without the aid of the ureteral catheter

DR HAMILL had since the last meeting palpated the ureters without difficulty, and had passed the catheter into them The ureters were about the size of the little finger

DR KELLY has, since the last meeting, operated successfully for the relief of a ureteritis in on unmarried young woman, the pelvic organs were healthy The inflammation was confined to the orifices of the ureters He experienced no difficulty in passing the catheters

DR PHILIP M SCHIEDT read a paper on the

DELIVERY OF THE AFTER COMING HEAD

"Time is the great factor in these cases It is generally considered that if the head is not delivered in from five to eight minutes after the delivery of the body, the child will be still born " Dr Schiedt took up the history of the literature of the subject from the time of Celsus, and the method of "expression" by suprapubic pressure, down through the various manual methods He deprecated the neglect of this subject by American and English authors, and entered very fully into a criticism of the methods advocated by German and French writers His own deduction from an analysis and comparison of these authorities, who widely differ in their teachings, and *from his own experience*, is that the forceps constitute "the best, quickest and safest treatment "

DR WM GOODELL had been struck by what seemed to him a great although common mistake, trying to secure flexion of the head in breech deliveries In a flattened pelvis it is better for the head to descend in a transverse position, so as to enable its shortest diameter, the bi temporal, to correspond to the short diameter of the pelvis, the antero posterior In a justo minor pelvis the operator would be justified in trying to secure flexion The fingers in the fœtal mouth are useless for good, but there is danger of breaking the jaw The forceps is the only proper aid in the expulsion of the after coming head One objection often made to their use is the loss of time involved in their application, but this does not hold The accoucheur should be acquainted with the form of the patient's pelvis The body of the child should be held away so that the forceps can be applied to the sides of the head, the handles being on the anterior aspect of the child's body Another point to bear in mind in a flattened pelvis, is the problem of bringing the head safely around the promontory of the sacrum The hand should grasp the neck of the child, the thumb being on one side and the fingers on the other, and traction should be

made so as to ease the head around the promontory before securing rotation of the face into the hollow of the sacrum After this it would be easy to make the chin engage or to apply the forceps

DR CLEEMANN has never met with any difficulty in delivering the face in head last labors

DR M PRICE makes it a rule to have his forceps ready in breech deliveries He has the body held out of the way and has had no trouble in putting in the forceps He has had but one death in a breech presentation On that occasion he had not his forceps with him

DR W S STEWART prefers breech to head presentations He has not had trouble in applying the forceps

DR LONGAKER laid great stress upon the necessity of avoiding mismanagement in the early stages of a breech delivery, there should be no immediate haste If the legs are seized and drawn upon the body is quickly delivered without securing dilatation of the os uteri and the arms become extended beside the head in the grasp of the lower segment of the uterus Forcible extraction at this stage is a frequent cause of extensive laceration and has caused death of the mother He agrees with Dr Goodell as to the treatment of these cases in flattened pelves the adaptation of the bitemporal diameter to the direct conjugate should be secured and the obliquity of Nagele should be maintained until the anterior base has well descended into the cavity of the pelvis The late Dr H H Smith laid great stress on the propriety of using the forceps to assist in the delivery of the after coming head In applying the forceps, flex the body of the child towards the dorsum, and the handles of the forceps should be on the anterior aspect Pressure over the head of the child, while the body is swept toward the belly of the mother is not a good or safe method, the amount of traction required to extract the head is too great for the neck to bear The forceps should be in readiness to apply as soon as the body has escaped from the vulva

DR EDWARD WILSON thought it a common mistake to hurry the delivery of the body of the child When dilatation of the os is complete the child will descend with the arms folded on the body He is as strong an advocate of the application of the forceps to the after-coming head as any man can possibly be

DR J C MORRIS could understand the defense for making traction on the lower jaw by putting one finger in the child's mouth When the buttocks are emerging, very slight traction will cause extension of the head, but if a hand is passed along the anterior aspect of the child's body and one finger introduced into its mouth the extension of the head might be prevented He did not think this defense a good one as traction on the lower jaw could not be effective He would quite as lieve have a breech as a vertex presentation The forceps should always be at hand and there is no difficulty in putting them on There is need of quick action Traction on the neck of the child may be productive of great injury He has known it to result in death, and in loss of power in the lower extremities

DR SCHIEDT wished to emphasize the necessity for the use of the forceps as the subject has been so slighted in modern medical literature

DR LONGAKER exhibited the *Ether Inhaler* and can combined, devised by Dr Young, of Bridgeport, Conn He had found it very useful in using chloroform in labor

DR BALDY took exception to Dr Longaker's statements that fresh air passed through the instrument at every inhalation and that the patient received a saturated ether vapor, as he considered them conflicting He preferred the folded, cone shaped towel

EXPLORATORY INCISION

DR MONTGOMERY reported the following case seen with Dr E R Stone

Mary G , æt 28, married, but not living with her husband She had noticed for some two months a swelling of the abdomen, this became so marked that Dr Stone had twice during this time emptied the abdomen by means of a trocar The fluid was plainly ascitic When Dr M was called the abdomen was again quite well distended, the resonance was that of ascites Vaginal examination disclosed a mass, quite resistant, situated upon either side of the uterus The rapidly recurring ascites, with the solid mass in the pelvis, aroused the suspicion of a malignant condition An exploratory incision was advised, and was made at the Med Chir Hospital, October 1, 1887 Drs Drysdale, Warder and Stewart assisting Upon opening the abdomen, two gallons of ascitic fluid were removed and the tumor presented itself It was covered with papillary growths which extended also over the posterior surface of the uterus, into Douglas' pouch and over the whole left side so that removal was out of the question The abdomen was thoroughly sponged out, and the wound closed and bandaged The following day frequently repeated doses of salines were given to produce watery evacuation and drain the peritoneum She was allowed but little liquid There was slight elevation of temperature, reaching 100° on the second day The wound had healed completely at the end of the week She left the hospital in two weeks, much improved in appearance and without any appearance of return of the ascites Since her return home there has been a reaccumulation Microscopical examination showed the growth to be an ovarian *papilloma*

DR MONTGOMERY exhibited an

INTRA-UTERINE FIBROID

as large as an orange It had been removed from a single lady æt 45 She had been suffering from hæmorrhage for over three years but had never been subjected to an examination A fibroid tumor was found projecting into the uterine cavity from the posterior wall She was admitted to his private hospital on June 22, and a large luminous tent introduced to dilate the canal The following day, assisted by Drs W H and C B Warder and West, he operated The patient was placed in the *lithotomy position*, the vagina held open by retractors, the uterus secured by a ligature through the anterior lip The tumor was adherent over the whole of the posterior surface It was enucleated as far as the finger would reach and finding that the mass was quite large the cervix was

split to the lateral fornix of the vagina on either side and the enucleation completed by the serrated curette After separation of the tumor great difficulty was experienced in its removal The tenaculum and volsella were repeatedly pulled out before the uterus was sufficiently dilated to permit the delivery of the mass A drainage tube was inserted and the cervix closed by three sutures upon either side The tube was removed on the third day There was no rise in temperature until the seventh day when it ran up to 103°, and some cellulitis was found upon the left side This soon subsided under treatment but the patient recovered very slowly She is now well

Dr Montgomery presented a specimen of

HEMATOSALPINX

Mrs K , æt 26 years, married twice, two children by her first husband, missed her menses in May, but had a natural flow June 9 Towards the end of June she felt badly, and so continued until July 11, when she was suddenly taken with violent pain in the right side A homœopathic physician was called, the severe pain soon abated Later he discovered a lump in the inguinal region, this he considered a forming abscess He attended her for four weeks, during which time she was kept in bed by pain in the abdomen and a bearing down or sense of weight, greatly aggravated by the sitting or standing positions Becoming discouraged, she called in Dr E Santee, who asked me to see her in consultation She was a very slight, girlish woman, looking not over sixteen years of age, pale, anæmic, very nervous and anxious Upon the left side of the abdomen could be felt a circular mass, three inches long by one a half in diameter, freely movable, not especially tender Per vaginam was felt a globular mass protruding the posterior wall of the vagina and filling up Douglas' pouch, and apparently continuous with the uterus It was at first supposed that it was a retroverted pregnant uterus More careful examination under ether disclosed fluctuation, and the uterus occupying an anterior position, but slightly enlarged An operation for removal mas advised, though a diagnosis was not certainly determined She entered my private hospital August 24, when, assisted by Drs Warder, Santee and West, the abdomen was opened In raising the tumor on the left side it was slightly ruptured, dark grumous blood escaping Its pedicle was closely connected with the uterus, and examination showed it to be a dilated Fallopian tube Passing the hand behind the uterus, the pelvis was found filled with an encysted mass which proved to be clotted blood This was scooped out by the hand full, the abdomen thoroughly washed out, the left dilated Fallopian tube removed, and the wound closed The temperature before the operation was 100 4°, in the after part of the same day it rose to 100 6°, which was the maximum reached during the convalescence The wound was healed when the dressing was changed at the end of one week The sac, when opened, contained a firm clot of blood, and from its appearance and the history, he believed that an extra uterine or tubal pregnancy had ruptured, causing the hematocele

PHILADELPHIA COUNTY MEDICAL SOCIETY

Stated Meeting, November 9, 1887

The President, J Solis Cohen, M D , in the Chair

Dr E T Bruen reported from his service in the Philadelphia Hospital, cases of

LAPAROTOMY FOR TUBERCULAR PERITONITIS, PULMONARY CAVITY TREATED BY INCISION, ABSCESS OF THE LIVER

Case 1 Abdominal section for chronic tubercular peritonitis —A summary of the prominent features of this case shows the following John B, aged thirty four Admitted to the Philadelphia Hospital May 8, 1887 His first departure from health began June 27, 1880, marked by abdominal pain, swelling of the feet followed in September of the same year His previous history showed a marked constitutional tendency to abscesses He had suffered from a great number of these, including an orchitis, which he considered non-venereal When examined on admission, dry, pleural friction râles were abundantly distributed over the lower zone of each side of the chest, indicating a dry pleurisy, and there were also the physical signs of diffused thickening of the lower portion of the right lung The sputa contained numerous bacilli of tuberculosis The abdomen was very prominent and much distended with fluid in the central portion, but in the hypochondriac regions of each side the course of the colon was defined as a prominent resonant swelling The liquid in the central portions of the abdominal cavity was apparently confined in a species of sac owing to adhesions formed between the peritoneum and the colon, since changing the position of the patient did not change the distribution of the fluid The liver and spleen were also enlarged, and there was marked dulness in the flanks and lumbar regions posteriorly The abdominal distension rapidly increased, uninfluenced by any treatment which was instituted The diagnosis of chronic peritonitis was based partly on the physical signs developed during the examination of the abdomen, viz , its peculiar contour, and the encysted collection of fluid There was no heart disease, and though there was a small ring of albumen in the urine, by Heller's test, there was no evidence of serious renal lesion The associated pulmonary process left little doubt that the nature of the inflammation was tubercular Moreover, there was no history of injury, nor could any evidence be elicited of chronic inflammatory process in the abdominal viscera which might have had an etiological relation with the peritonitis These considerations were especially valuable because the patient's general condition was excellent, color good, and appetite unimpaired On June 18 a gallon of clear serum, with some few shreds of lymph, was withdrawn Unfortunately, paracentesis was necessitated about every three weeks thereafter on account of the rapid accumulation of the fluid, and the dyspnœa occasioned by it The pulmonary process being latent, and the general condition of the patient excellent, laparoto-

my was suggested, and it was thought that possibly by irrigation of the abdominal cavity by means of antiseptic solutions the character of the inflammatory process could be modified and the reaccumulation of fluid prevented On June 28 the operation was accordingly performed by Dr Deaver, assisted by Dr Montgomery On opening the peritoneal cavity a large amount of serum escaped, but no pus was found

The peritoneal surface was much injected and dark red in color, much roughened, and covered with flakes of plastic lymph After drainage, iodoform was dusted freely over the peritoneal surfaces, and the wound closed The patient's subsequent history was unsatisfactory Vomiting was a continuous symptom, and death occurred July 6, nine days after the operation

At the autopsy it was found that an acute attack of peritonitis had followed the operation Extensive adhesions existed along the course of the colon, the diaphragm on the right side was welded to the liver, and on the upper surface extensive adhesions to the pulmonary pleura had been formed The right lower lobe of the lung was infiltrated with nodules of miliary tubercle, the left lung was normal

This case is reported because the number of cases of chronic peritonitis on record is limited in which abdominal section has been performed While tubercular peritonitis is a most serious disease, yet the process may become latent, as is so familiar in tubercular pleurisies in the course of phthisis Just as the gravity of tubercular pleurisy depends upon the pulmonary lesion, so the gravity of tubercular peritonitis depends upon the extent of the frequent antecedent lesions present in the bowels and to the impairment of the functional activity of the digestive tract by the adhesions

The indications for laparotomy would seem, to the writer, to be the same as those which guide us in the inflammations of neighboring serous membranes, the pleura and the pericardium Incision should be avoided in tubercular peritonitis unless the inflam mation is purulent Not only so, but when the tubercular process is present, even paracentesis should be practiced only in those cases in which dyspnœa, from over distension of the serous sacs with fluid, threatens life The danger of operative interference in tubercular inflammation of serous sacs is, that the inflammatory process nearly always becomes purulent

The etiology of the tubercular peritonitis in this case would seem to have been absorption of bacilli from the intestinal canal, possibly from swallowed sputa, particularly as no ulceration of the bowel could be found The lesions in the lung were so inconsiderable, when compared with those of the peritoneal cavity, that the possible channel of abdominal infection was unlikely, viz , the inoculation of the pulmonary lymphatics with those of the diaphragm and abdomen On the other hand, traced from the peritoneal cavity upward, the extensive double pleural process, and the absence of disease of the apex of the right lung, showed that the inflammation probably developed from the peritoneal cavity upward

Case 2 Drainage of a pulmonary cavity —A man, aged twenty-seven years, was found on admission to the hospital to have all the physical signs of a large cavity in the lower lobe of the left lung The physical signs were so unequivocal that the cavity was thought to be very superficial, and to occupy a large portion of the lower left pulmonary lobe The upper lobe was evidently also implicated, the right lung was nearly normal, although at the apex a few moist, crackling râles could be detected

The history of the case was indefinite, but it was gathered that the disease in the lung came on suddenly about six weeks previously, with pneumonic symptoms At date, October 20, the patient suffered very much from cough, expectorated freely pus and nummular sputa, which contained tubercle bacilli The temperature indicated absorption of septic matter, ranging from 100° to 102° The location of the vomica prevented the antiseptic inhalations from really reaching the part, and the patient could not readily empty the cavity by coughing After consultation with two of my colleagues, Drs Curtin and Osler, it was determined to open the cavity and attempt to secure local drainage The physical signs of superficial cavity being most intense at the angle of the left scapula, it was decided to operate at this point Resection of a rib was requisite to obtain working room, as the ribs are close together at this point On October 27 the patient was placed under ether, and Dr Janney, assisted by Dr Porter, removed about one and a half inches of the ninth rib just within a line drawn from the angle of the scapula The pleural surfaces were found to be adherent, and the pleural membrane was slightly thickened It was decided to attempt to enter the cavity with the large needle of an aspirator, and the same was accordingly introduced Although the physical signs had been so pronounced, yet the needle was introduced two inches into the lungs in several directions without entering the cavity The punctures caused no coughing, disturbance of respiration, or, in fact, any inconvenience When the needle was disconnected from the aspirator some little blood escaped, and sufficient air to extinguish a match Finally, a large-sized trocar was introduced in two directions, and it was thought, from the manner in which the front of the instrument moved, that the cavity had been penetrated A small drainage tube was introduced, and the wound dressed after the antiseptic method On the following day the dressings were removed, and it was found that at least an ounce of pus had escaped from the sinus It was decided to enlarge the sinus in which the drainage tube had been placed by dilating it daily with rubber catheters The second day after the operation, while this dilatation was being practiced, suddenly several ounces of pus gushed through the sinus and escaped externally, and thereafter the sucking was heard, so familiar after an empyema has been incised It was manifest that the cavity had, at least, been freely opened, for now injection of fluids into the vomica could be coughed up through the bronchi A blunt probe could be passed seven inches directly into the chest,

and the impulses of the heart could be detected along the probe

There were several points of interest in connection with the details of the operation The first of these was the fact that the cavity was situated at least two inches from the pulmonary pleura Secondly, the first two days the cavity was either not entered, or only a minute opening was created, and yet no damage to the lung occurred, and the temperature fell a degree and a half

The propriety of entering similar cavities with the thermo cautery has been suggested, but when the cavity is situated deeply may not the mode adopted in this case be more simple? Certainly there were no evil effects in the present case I would suggest, therefore, the puncture of cavities in the lung by trocar, and then a small drainage tube can be introduced through the canula, the drainage tube can be exchanged for a large one by dilating the sinus The resection of one or more ribs seems to me an *important feature in the operation for the opening* and drainage of pulmonary cavities, because retraction of the costal wall is facilitated by this measure The general condition of the patient has steadily improved since the operation, and at date his temperature is normal, with greatly reduced cough and betterment of the general strength On November 1, he passed under the care of my colleague, Dr J C Wilson

It is familiar ground to consider the propriety of this operative procedure I feel sure, however, that the most successful treatment of chronic pulmonary inflammations includes rigid antisepsis as one of its cardinal features When cavities have formed their local treatment seems very desirable whenever the strength of the patient at all justifies any hope of success from treatment In regard to the presence of pleural adhesions, these may be counted on whenever the cavity has attained large enough dimensions to allow operative interference to be considered

Case 3 Abscess of the liver —John R , aged 63 years, admitted to hospital October 10, with temperature 102°, and marked symptoms of the typhoid state The bowels were involuntarily moved several times in the twenty-four hours The only other symptom of special importance was severe epigastric pain The patient had been ill for two or three weeks previously, but could give no account of the symptoms On October 16, the liver was very noticeably enlarged, at least an inch in all its boundaries Pain in the epigastrium was a prominent symptom The left lobe of the liver was enlarged, splenic dulness normal, lungs normal The passages from the bowels occurred four or five times daily, and were yellow, watery, and offensive

Temperature October 16, 10 A M , 101°, 6 P M , 102°

17th, 7 A M , $100\frac{3}{5}$°, 11 AM , $103\frac{3}{5}$°
17th, 2 P M , $98\frac{1}{5}$°, 9 P M , 104°
18th, 7 A M , $100\frac{3}{5}$°, 6 P M , 102°
19th, 7 A M , $101\frac{3}{5}$°, 7 P M , 103°
20th, 7 A M , 102°, 7 P M , $101\frac{4}{5}$°
21st, 7 A M , $100\frac{1}{5}$°, 7 P M , $100\frac{1}{5}$°
22d, 7 A M , 100°, 7 P M , $99\frac{3}{5}$°
23d, 7 A M , 100°, 3 P M , 98°

On the 17th 10 grains of antifebrin were given at 11 o'clock, at 2 P M , the temp was 98° Temp at 9 P M , 104° Antefibrin again given, and at 10 o'clock tem $101\frac{3}{5}$° He had a chill at 11 A M , on the 16th, and at 10 A M , on the 17th, neither was followed by sweating The diagnosis of enteric fever was considered and set aside as improbable, on account of the age of the patient, the absence of enlargement of the spleen corresponding to the enlargement of the liver The disorder of the bowels, the pain in the epigastrium, suggested hepatic disease

October 21 The left lobe of the liver was very positively enlarged and tender on pressure The right hepatic lobe was slightly enlarged The right parotid gland was also swollen The evidence of enlargement of the left hepatic lobe with the foregoing symptoms suggested the diagnosis of suppuration Aspiration was determined upon, and the *needle introduced obliquely through the abdominal* wall The needle seemed to slip up over the dome of the liver It was then introduced more perpendicularly, using some pressure, penetrating the abscess, and several ounces of pus were withdrawn On the 22d an exploratory incision was made through the abdominal wall over the point of puncture, and the liver incised Unfortunately, the spot selected for this operation was almost the only square inch of liver which could have been cut without entering the abscess cavity, as will be seen by examining the post-mortem specimen The abscess cavity lay within half an inch of the point of operation The liver was stitched to the abdominal wall, and further explorations would have been made, but death occurred on the following day

Post mortem examination The body was that of a medium sized man very well nourished On opening the abdomen, the left lobe of the liver was found adherent to the abdominal wall This lobe of the liver was enlarged, had a grayish fibroid appearance on the surface, and was closely connected by adhesions with the posterior wall of the stomach On separating the stomach from the liver the abscess was ruptured, and a large quantity of pus escaped There was also a large abscess cavity in the upper and posterior part of the right lobe The tissue shows evidence of recent breaking down, and there is much reddish infiltrated liver tissue in the vicinity There was also a second abscess about the size of an orange, in the right lobe near the suspensory ligament

In the large intestine in the region of the anus, extending two or three inches upward, was a large sloughing mass, with a thick, deeply infiltrated base The edges of this ulcer are greatly thickened Extending above this into the sigmoid flexure, were five large ulcers, and a second large sloughing mass No ulcers were seen on the ascending and transverse colons

The portal vein was free from clots The kidneys were sclerotic, and their cortical portion much diminished Spleen was soft and of normal size Heart, the left ventricle was hypertrophied, aortic

arch dilated and atheromatous -Lungs, œdematous at bases and emphysematous at edges Right parotid gland was enlarged, shows on incision into substance, numerous foci of suppuration The hepatic abscesses are, therefore, undoubtedly embolic, and the lesions in the large intestine were the source of the embolism

It is noteworthy that no hæmorrhage occurred when the liver was incised It also appears to me that the best method of locating a deep abscess after incision of the abdominal wall, would be by passing a trocar into the abscess cavity, and then dilating the sinus This method would obviate the danger of hæmorrhage from the hepatic structure when it may be considered inadvisable to use the thermocautery The recital of this case affords the writer the opportunity to say that he is satisfied that the liver can be safely explored with a moderate sized aspirator needle He has frequently practiced this method in doubtful cases without ever having noticed unpleasant consequences Finally, without entering upon a detailed study of the general diagnostic features of hepatic abscess, it will be observed that the temperature chart of this case shows a wide diurnal variation in the temperature, yet the subnormal temperatures frequently noticed in hepatic abscess were not present, and as antifebrin was used in the treatment, the subsidence of the temperature was probably due to the use of this drug The temperature, therefore, was much more than that of a continued fever, than is commonly noticed in these cases

DR W OSLER said I think that in these cases of abscess of the liver we should, if possible, arrive at an accurate opinion with reference to the etiology of the abscess I saw this case once or twice with Dr Bruen, and I think that if we had made a careful examination of the rectum, the liver would not have been explored, as abscesses resulting from dysenteric processes in the large intestine are almost invariably multiple To explore the liver thoroughly in a case of multiple abscess is a hopeless surgical procedure

With reference to the case of tubercular peritonitis, I may say that these cases frequently come before surgeons and gynecologists for diagnosis In some cases the effusion simulates closely a tumor I do not believe that surgical interference will ever come into vogue in the treatment of this condition, as the general condition of the patient is, as a rule, such as not to warrant surgical interference In the case reported to night, the rapid reaccumulation of the fluid brought in an element which rendered it probable that incision would be of service

DR W H PARISH said I have had no experience in exploring the liver for pus, but I should hesitate a long while before accepting the statement that it is safe to explore an abscess in any organ where it was necessary to pass the needle through the peritoneal cavity If adhesions exist between the two peritoneal surfaces, the exploration may be safe The experience of all abdominal surgeons is that aspiration of a tumor within the abdomen, more particularly of tumors containing pus or irritating fluids, is attended with considerable risk I think that aspiration of an abscess of the liver, where adhesions had not been formed, would be attended with more risk than the aspiration of an ovarian tumor, and the risk attending the latter is not small The usual septic character of the pus of an abscess in the liver, must render aspiration peculiarly hazardous The thrusting of an aseptic needle into healthy liver tissue is, however, doubtless quite safe

DR J B ROBERTS said I scarcely think that tapping of the liver is such a dangerous procedure as would be indicated by the remarks of the last speaker If I had a case of suspected abscess of the liver, I should introduce an aspirating needle in various directions with a great deal of certainty that I should do no harm There would certainly be no harm if an aseptic needle were used and there was no pus The escape of a little aseptic blood into the abdominal cavity is not a serious matter It would be a more serious matter to leave an abscess of any ordinary size undetected

Abdominal section in cases of tubercular peritonitis seems hardly in accordance with our ordinary ideas In the paper to which Dr Bruen has referred, I see that the author has claimed that good results were obtained I can hardly see what good could be expected from it

DR W G PORTER said Some six months ago a patient was admitted to the Presbyterian Hospital There was a considerable collection of fluid in the abdomen, and on palpation a growth could be felt, the exact nature of which we could not determine It was decided to make an exploratory incision On opening the abdomen an extensive tubercular peritonitis was found Since the operation, the woman has remained in about the same condition as previous to it

DR BRUEN said With reference to exploration of the liver, I gave expression to my opinion because I think it desirable to have the experience of those who have punctured the liver Not long ago I saw a case of suspected abscess of the liver, and on three separate occasions I punctured the liver in different directions before I succeeded in obtaining pus Although the abscess was a large one, no harm resulted from the punctures In one case I punctured the liver as often as six times, but failed to find pus This patient recovered

I would reiterate that with aseptic precautions, I consider this a safe thing to do The calibre of the needle should be as small as possible At the same time, the pus is often thick, and it is necessary to employ a needle of fair size Of course, if it was thought that there were a number of abscesses in the liver, we should not think of operating, but in view of the uncertainty which attends the diagnosis, I think it right to give the patient the benefit of the doubt All of the cases of abscess of the liver that I have seen in this city have been pyæmic In one case, the abscess sac was very large, and if drainage had been secured early, temporary benefit at least would have been obtained

CHICAGO MEDICAL SOCIETY

Stated Meeting, October 17, 1887

THE PRESIDENT, W I BIFFIELD, M D, IN THE CHAIR

(*Concluded from page 790*)

DR A H BURR exhibited an

ACEPHALOUS CHILD AT TERM

A lady was taken with labor pains a 7 o'clock this morning, at 9 I was called to see the case, and at 10 this specimen was delivered There is an entire absence of cranial development, the features pretty well developed, but no neck is apparent, and the spine is bifid, commencing with the seventh vertebra, the divided prominences are plainly discernible on the bifurcativus from here to their attachment, apparently to the parietal bones The occipital bone seems to be absent Some of the interesting features in this case were the enormous amount of amniotic fluid I have never seen so much—smallness of the placenta, smallness of the cord, and a little variation in the attachment of the cord to the placenta, its attachment was at the centre, but there seemed to be an adhesion of the cord to the amnion pretty near to the margin of the placenta, and along the course of this adhesion some of the placental veins passed into the cord I delivered this lady nearly three years ago of a very healthy and well developed boy, with exception that he has hypospadia She had given birth prematurely to two others that were similarly deformed

Stated Meeting, November 7, 1887

THE PRESIDENT IN THE CHAIR

DR JAMES H ETHERIDGE read a paper on

VAGINAL HYSTERECTOMY

(See page 806)

DR C T PARKES I am very much pleased with this paper, in that it introduces a method of controlling hæmorrhage that has been satisfactory to me a good many times We are indebted to Péan, of Paris, for this method He depends upon it on all occasions and in all operations It is not an unusual thing to find a wound that he has made containing a dozen of these forceps He never uses a drainage tube After seeing it done by him, I have resorted to the use of the forceps as a means of hæmastasis in all operations where it was difficult to apply a ligature, and especially in removal of carcinoma of the rectum Any one who has performed that operation knows how difficult it is to apply a ligature that can be trusted, high up in a wound so small as that made in the removal of a carcinoma of the rectum And on several occasions I have left half a dozen forceps, removing them in twenty four hours, without subsequent trouble It saves a great deal of time, and is perfectly reliable I do not think, it is necessary, on all occasions, to leave the forceps on forty-eight hours I think that after squeezing with the large jawed forceps for twenty four hours, there is scarcely any danger of hemorrhage from a vessel the size of those that are included in it, and by diminishing the time of the retention of the forceps you reduce the danger of necrosis of the tissue contained in the forceps Another point, I don't see the necessity of turning the uterus over, thus endangering the entrance of diseased tissue into the peritoneal cavity The posterior wall is uncovered, the broad ligaments are exposed, and what is the use of turning the uterus over? These forceps will reach the top of it, and they will include the broad ligaments on either side, and they can be applied just as well with the uterus in position as if it was turned over There is great necessity of keeping close to the uterus with the forceps I think there is more danger with the use of the forceps, in including the ureter, than we are aware of, and if the operation is done where there is any probability of recovery, it does not do any harm to keep well up to the uterus If the tissue is diseased beyond that point you might as well let the patient alone

DR D T NELSON I wish to quote a word from Martin, of Berlin, spoken before the International Congress, where this subject was discussed quite fully He advocates the operation strongly, and made this important point, which I think, was not too much emphasized by the reader of the paper, that the operation is not justifiable when the uterus is not movable When the tissues above and about the uterus have become involved by the diseased condition, then the operation should not be done Martin's later operations have been only upon this class of cases, and consequently the promise of success—permanent cure—has been far greater than it would otherwise be

FOREIGN CORRESPONDENCE

LETTER FROM VIENNA

(FROM OUR OWN CORRESPONDENT)

Sixth International Congress for Hygiene and Demography, in Vienna

The third Section discussed in its first session, on Tuesday, September 27, the report presented by Dr Hueppe, of Wiesbaden, viz "The Connection between the Supply with Drinking-water and the Origin and Spread of Infectious Diseases, and the consequences to be derived therefrom with reference to Hygiene" The Section was presided over by Prof Virchow, of Berlin, and Prof Gaffky, of the same city, held the place of a Vice-President The reporter, Dr Hueppe, directed the attention to the printed report he had presented, and remarked that though there were no positive proofs for the importance of the water-supply with reference to the epidemic spread of typhoid fever and cholera, our experience and the general considerations made it none the less probable that the drinking water indeed played a part in the spread of those infectious dis-

Scarlatina as a Prophylactic It had long been known, he said, that foot and mouth disease may be communicated to the human subject, either through the agency of milk from animals suffering from the disease or by the accidental introduction of virus into open wounds Among the characteristics which it presented in man were glandular enlargements, vesicles in the mouth and upon the hands and feet, and, in cases, a scarlatinal eruption on different parts of the body This was the case with Herting and others who purposely contracted the disease by drinking milk from infected cows

He then gave some account of the sudden and severe epidemic of sore throat which occurred in Dover, England, in 1884, and attacked the inmates of the best houses in the place, and said that it was conclusively proved that the outbreak originated from milk obtained from cows suffering with foot and mouth disease In the majority of the cases the two principal symptoms were inflammatory sore throat and enlarged cervical gland, while in many instances vesicles were also noted The sequelæ in general resembled those of scarlet fever An investigation of 182 of the cases, made two years after the outbreak, showed the following points

1 None of the patients had since had scarlatina

2 Members of families who had previously had scarlatina as a rule escaped the epidemic, while those who had not had scarlatina were generally attacked

3 Sixteen of the patients had already had scarlatina

4 Four of them were very mild cases

5 Two of them had had scarlatina when they were very young

6 In ten cases it was doubtful whether the patients had had scarlatina or not

After directing attention to the significance of these facts Dr Stickler related the histories of three cases in which he inoculated children with virus from milch cows and subsequently exposed them to the contagion of scarlet fever The first was a boy 8 years of age, who after he had entirely recovered from the effects of the inoculation, was taken to the bedside of a scarlet-fever patient and made to inhale the breath of the latter and place his head upon the pillow and by him Yet, notwithstanding this experience, the boy did not develop scarlet fever The second was a child 4 years of age, in whom the inoculation produced much greater constitutional disturbance than in the preceding case The throat and mouth became sore, the temperature rose to 103°, and there was a scarlatina eruption followed by desquamation This child was afterwards directly exposed to the infection of scarlet fever in the same way, and did not contract the disease The third child inoculated was a boy ten years old, and although during the three years that had elapsed since he had been inoculated he had more than once been exposed to the risk of scarlet fever, he had thus far escaped having it

While foot and mouth disease, Dr Stickler said, was essentially the same in man as in animals, there were some points of difference, and he now proceeded to describe in detail the symptoms met with in the latter There were four marked stages its clinical history in animals, viz fever, eruption, desiccation and desquamation In milch cows the flow of milk became nearly suppressed, while the milk secreted was of a yellow color and readily coagulated on boiling or even when exposed to a moderate degree of heat There were vesicles in the mouth and throat, and unhealthy ulcers and erosions were sometimes left after them Thomas had stated that scarlet fever was the only disease in which the mucous membrane could be torn away in considerable pieces, but he was probably not aware that this was also the case in foot and mouth disease Repeated attacks of the affection in the same animal were supposed to be rare, but authorities differed very greatly in regard to this point

Klein, he went on to say, had discovered what he believed to be the germ of foot and mouth disease, and stated that it could not be distinguished from the germ met with in the disease, caused by milk, at Henden, and was unquestionably scarlatina In order to test the transmissibility of scarlatina from man to the lower animals, Dr Stickler inoculated two colts by injecting virus into the jugular vein, and also giving them mucus from the throats and mouths of scarlet-fever patients to swallow In one colt the temperature went up to 103°, and in both there was sore throat, redness of the mucous membrane, cough and difficulty of deglutition In one of the cases there also resulted desquamation Having repeated these experiments in a large number of other animals, he was convinced that it was possible to inoculate the lower animals with scarlatina

In inoculating human beings with virus from animals thus treated the lesion was found to be a mild one, and he believed that this virus could be used in such a way as to prevent scarlet fever subsequently Five years ago he had inoculated twelve cases in this way with good results Out of thirteen other children inoculated, who were already exposed to the infection of scarlet fever at the time, five escaped the disease entirely, while eight were attacked with it None of these cases were severe, however, and the question arose whether the severity of the attack had not been mitigated by the inoculation In conclusion, he stated that he hoped to pursue still further the investigations in which he was engaged

In the discussion which followed the paper Professor Law, of Cornell University, said that as regards the prophylactic power of foot and mouth disease against scarlet fever in the human subject, he was still skeptical In Great Britain there are frequent outbreaks of the disease, which affected not only the cattle but the people coming in contact with them, and he thought that if foot and mouth disease was a protection against scarlatina, the latter ought to be a much less common affection there than in this country, where epizootic apththa, or foot and mouth disease, was almost unknown Such, however, was not the case, as the statistics showed that during the last five years there had been no less than 90,000 deaths from scarlatina in Great Britain Then, again, an attack of foot and mouth disease conferred a very limited, if any, immunity from subsequent attacks,

and he had known it to recur within six months in the same animal Recurrence of the disease was very common in his experience, and he would, therefore, hardly suppose that inoculation with it would confer immunity from scarlatina for any length of time, if at all Still, it did certainly follow that the immunity conferred by foot and mouth disease might not be more extended in a race less susceptible to its influence than the bovine

As regards foot and mouth disease, Professor Law said he would strongly urge that the investigation should be carried on on the other side of the Atlantic, as he thought it would be a very serious matter if that affection should be introduced by this means among American cattle, and he had no doubt that there would be a general outcry among the cattlemen if it were known that experiments were being made with the virus of the disease in this country Then, as regards scarlatina, he said he feared that if the virus of this disease were employed for making inoculations it would only disseminate scarlatina more widely While he had great respect for the ability and achievements of Pasteur, he could not but believe that he had increased the spread of anthrax by scattering broadcast anthrax virus, for he was convinced that a weakened virus might under certain conditions be rendered potent and dangerous In the same way, he believed that rabies would only be increased by the dissemination of his attenuated virus of that disease, and he understood it to be a fact there had been more rabies among the dogs in England since the discovery of Pasteur than ever before These considerations, in his opinion, condemned the methods proposed by Dr Stickler for the prophylaxis of scarlet fever

Among the other speakers was Dr J Louis Smith, who said that since the time of Jenner the hope had been awakened that some of the other fatal infectious diseases, and especially scarlet fever, might be prevented, as small pox had been, by the substitution of a milder and modified disease derived from the lower animals As regards scarlet fever, two propositions of great interest and importance had arisen *First* Is there a disease in the bovine race which is a true scarlet fever, or which communicates genuine scarlet fever to man? and, *Second* If there is such a disease does it produce a mild and modified form of scarlet fever in man? Many instances had been recorded in the last five or six years in which epidemics of scarlet fever had arisen from the use of milk furnished by healthy cows and infected with the scarlatinous germ after the milking, but in the St Marylebone and Henden epidemics, occurring two years ago, the outbreak of scarlet fever appeared to be clearly traced to diseased cows The point to which he wished to call attention was this The sickness of the cows was mild, not appreciably impairing their appetite, or diminishing their milk, but the disease which the use of the imported milk produced was described as an intense outbreak of scarlet fever Instead of a mild disease being propagated from the cow for which we are looking, the reverse had occurred A mild form of the disease in the cow produced a severe one in man, so that it appeared from the history of this epidemic that by inoculating with the bovine scarlatinous virus we might produce severe and fatal epidemics, instead of a mild and modified form of the disease

Dr McLean, one of the veterinaries present, contended that while the epidemics alluded to had undoubtedly originated from milk, it had by no means been proven that the disease came from the cows themselves, and expressed the opinion that there was no such thing as bovine scarlatina except possibly in cases where scarlatina was produced in the cow by direct inoculation with scarlatinal virus from the human subject

In closing the discussion Dr Stickler said that if he produced only a slight and harmless attack of scarlatina by his inoculations he could see no objection to the use of scarlatina virus for this purpose, and when the terrible aspects of the unmodified disease are taken into consideration the extreme importance of securing some such means of protection was evident As to the disease from which the Henden cows suffered, it had, he thought, been clearly demonstrated that it was nothing else than scarlatina, since it was precisely the same affection as was ordinarily produced in cows by the inoculation of scarlatinal virus from the human subject

The beautiful new building of the New York Cancer Hospital, on Eighth Ave and 105th street, opposite Central Park, which is largely the gift of Mr and Mrs John Jacob Astor and the late Mrs General Cullom, was formally opened with appropriate ceremonies on the 6th of December On this occasion the principal address was made by Dr Fordyce Barker, and addresses were also made by Dr Wm H Draper, the Rev Dr John Hall and John E Parsons, Esq , President of the Board of Trustees The present structure, which is admirably adapted in every way for the purpose designed, is for female patients alone, of which it will accommodate about eighty, and will constitute only a single pavilion of the institution when the entire hospital, as it is now contemplated, is completed As was stated in this correspondence when it was first announced that the building was to be erected, it is unfortunate that the efforts of those having the matter in charge should not have been exerted in behalf of the New York Skin and Cancer Hospital, an institution of prior origin and one which embraces the same objects in its scope, since by this division of interests there is naturally a considerable waste of energy and resources which ought properly to have been concentrated upon a single charity of the kind

At a recent meeting of the Clinical Society Dr McKim reported a successful case of laparo elytrotomy for deformed pelvis The child was born dead, but the mother, after a pretty hard struggle, in which oxygen gas was used with good effect in supporting the flagging powers of nature, recovered In this connection it may be noted that Dr Wm T Lusk is winning splendid laurels for himself by his Cæsarean section by the modified Sanger method, having had three successful cases within a year, two of which have occurred during the past autumn In the first two cases both mother and child were saved,

but in the third, which is quite recent, the child unfortunately died of tetanus

In the death of Dr Theodore R Varick, the eminent surgeon, of Jersey City, the New York State and County Medical Associations have lost a most devoted friend and highly valued contributor to their scientific work In 1885 he read an able paper on the use of hot water in the treatment of wounds, in which remarkable results with this method were reported, before the County Association, of which he was afterwards made a non-resident member, and at the meeting of the State Association in 1886 he took a conspicuous part inthe discussion on the treatment of gunshot wounds of the intestines which constituted the most noticeable feature of the session

P B P

NECROLOGY.

MARTIN ROOT, JR

Martin Root, Jr, M D, of Byfield, Mass, the fourth son and tenth child of Martin and Lucinda (Clary) Root, was born July 8, 1802, at Montague, Mass, which was his home through boyhood and early manhood He died at his residence in Byfield, October 28, 1880

His rapid growth out of boyhood—some six inches in seven months—caused an unhealthy development of height of which he was so ashamed that he used to sit at his studies bending over as much as possible, endeavoring to hide his height, until hæmorrhage of the lungs compelled him to desist His physician advised a sensible hygienic treatment of open air exercise, and he also wore the old fashioned steel busk to help maintain an erect position

His literary education was the common school of his home, followed, when about 22, by one term at Amherst Academy Then he taught a district school for one winter in Granby, Mass, after which he commenced the reading of medicine with Dr Sellon, a popular and successful botanic physician of Amherst His lecture courses were at the Vermont Academy of Medicine, connected with Middlebury College, Vt, but located at Castleton, Vt, during the fall terms of 1824 and 1825, with a private supplementary course in Anatomy at Albany, N Y, under the tuition of Dr Alden March, in the winters of each of these years, and graduating as an M D, at Middlebury, in the summer of 1826

In the autumn of 1826 he attended a post-graduate course at the Berkshire Medical Institution, located at Pittsfield, Mass, and connected with Williams College

The names of William Tully, Amos Eaton, Chester Dewey and John De la Matter appear among his instructors during these courses

His life seemed destined to be a short one, but the preventive training of Dr Sellon apparently held at bay the further progress of the disease, and enabled him to return home at the close of his medical studies in readiness for the opening of his life work

One day he heard allusion made to a place called Byfield, whose physician, Dr Parker Cleveland, had died about a year before, after an active medical service of fifty years, and in March, 1828, he set out upon an exploring tour He found it difficult to learn anything about the place, though one landlord told him that he had heard of a Byfield breed of hogs of considerable local celebrity But at last Dr Root reached the place The prospect seemed satisfactory in its outlook, especially as Dummer Academy was located there, and a cotton factory, the first in New England, was at work at Parker River Falls, and he took up his abode and his work for life

On March 2, 1829, he married Jerusha Barbour, daughter of James and Dorcas (Doane) Barbour, of Bridport, Vt, who was at that time living with her brother, Rev Isaac R Barbour, the minister of Byfield Parish A family of seven children filled the home, of whom five are now living The youngest child, Richmond Barbour, is a physician in Georgetown, Mass, and a member of the Massachusetts Medical Society

After some ten years of practice his health began to fail, compelling him to take a vacation of six weeks, which was spent in a carriage journey to the Lake Champlain Valley of Vermont This little rest seemed to renew his vigor, and he never again left his work for any length of time

He became a member of the Massachusetts Medical Society in 1834, and at the second annual meeting of the Essex North District Medical Society he was one of the three selected for return to the Recording Secretary of the Massachusetts Medical Society as Councillors In July, 1843, he was chosen Secretary *pro tem* of this District Society, and his name then first appears officially affixed to the record of this meeting At the next annual meeting he was chosen Permanent Secretary From the official recognition of his death by this Society we quote the following allusion to his work as Secretary

"From this time on his name is signed to the records of every meeting, with a single exception, up to January 29, 1874, a period of over thirty years, and only once during all this time was he absent

"At the twelfth annual meeting the office of Treasurer was joined to that of Secretary, and from that time he was in charge of the finances of the Society At the annual meeting of May 6, 1874, he declined a reelection on account of the failure of his eyesight, connected with the other infirmities of age Dr Garland, of Lawrence, offered the following resolution, which was unanimously adopted

"'*Resolved*, That Dr Martin Root, by his untiring industry and faithfulness as Secretary and Treasurer of this Society for a period of thirty one years, has secured our entire confidence and highest esteem, and as a slight testimonial of this feeling we authorize the Treasurer to pay over to him the sum of fifty dollars for his sole use'

"A small tribute, surely, for such long and faithful service, but bestowed with the most cordial goodwill From this time he was seldom present at our meetings"

For fifty-two years he engaged in the active duties of his profession, until about four years before his

death, when a gradually failing eyesight ended in a year or two in almost complete blindness, until he passed out of this darkness into the light He became a member of the American Medical Association in 1855 He attended in 1860, 1864 and 1865

There is little in a life spent in the sequestered, unheralded Parish of Byfield which can interest the public at large, even though that life was measured by a half century of most honorable professional work Cautious in his treatment of disease, he had few errors to try to make right Conservative in his thinking, he yet led two Harvard medical students to say that the "old doctor" taught them a lesson of progress even in old age And more than all else in his character, the moving power of every thought, word and act was that of supreme loyalty to the Christ who to him was all in all

His life is embalmed in the memory of the families for whom he was the "beloved physician" for fifty years—whose children entered life with his attendance, whose sick were restored to health by his untiringly faithful care, and whose dead ones his skill could not save M N R

ALMON S BONSTEEL, M D

Dr Bonsteel, a prominent physician of Corry, Pa, died of diphtheria on October 22, at 49 years He was born in Ellicottville, N Y, July 17, 1838 He was graduated from Bellevue Hospital Medical College He settled in Corry in the spring of 1872, and was engaged in active practice until he fell a sacrifice to the duties of his profession He was a member of the County and State Medical Societies, and of the American Medical Association He was an accomplished, energetic, and unassuming physician, and an upright citizen

BOOK REVIEWS

A System of Gynecology By American Authors Edited by Matthew D Mann, A M, M D, Professor of Obstetrics and Gynecology in the Medical Department of the University of Buffalo, N Y Volume I Illustrated with 3 colored plates and 201 engravings on wood 8vo, pp xii–789 Philadelphia Lea Brothers & Co 1887

PRELIMINARY NOTICE

Notwithstanding the number of works on gynecology, and the recent rich development of gynecological literature the profession in this country has now eagerly looked forward to the appearance of this, the first volume of the System of Gynecology by American Authors, which was announced as forthcoming several years ago The place, the need, for such a work need not be discussed, being apparent "Gynecology has now grown to an extent which requires for its thorough treatment this cooperation of representative men, and it is eminently fitting that the science which is in so great a degree of American origin should be thus presented by American practitioners"

The opening chapter of this volume is a "Historical Sketch of American Gynecology," by Dr Edward W Jenks, of Detroit The remaining fourteen chapters, with the names of the writers are as follows The Development of the Female Genitals, by Henry J Garrigues, Anatomy of the Female Pelvic Organs, by Henry C Coe, Malformations of the Female Genitals, by Henry J Garrigues, Gynecological Diagnosis, by Egbert H Grandin, General Consideration of Gynecological Surgery, by E C Dudley, General Therapeutics, by Alexander J C Skene, Electricity in Gynecology, by Alphonso D Rockwell, Menstruation, and its Disorders, by W Gill Wylie, Sterility, by A Reeves Jackson, Diseases of the Vulva, by Matthew D Mann, Inflammatory Affections of the Uterus, by C D Palmer, Subinvolution of the Vagina and Uterus, by Thaddeus A Reamy, Periuterine Inflammation, by Richard B Maury, and Pelvic Hæmatocele and Hæmatomata, by Ely Van de Warker

The volume is well indexed As usual, the publishers have done their part of the work in a way to which no exception can be taken

ASSOCIATION ITEMS

MALARIA AND THE CAUSATION OF FEVERS

To the members of the Committee on State Medicine, and to others interested in Public Health subjects

Gentlemen—As Chairman of the Committee on State Medicine, of the American Medical Association, and as one greatly interested in sanitary progress, permit me to offer a few suggestions designed to systematize the work of our Section at the next meeting of the Association, in Cincinnati, Ohio, the second Tuesday in May, 1888

It would seem that a stronger impulse can be given if, instead of scattering over the entire field of the medical sciences, many of us concentrate our efforts upon the same subject

As the first requisite for the prevention of sickness or of deaths is a knowledge of the *causes* of the sickness or of the deaths, and as the causation of disease may be most appropriately studied in an association of physicians, I recommend that an effort be made to contribute for the advancement of our profession, for the use of non medical sanitarians, and for the benefit of humanity in general, so much as is practicable of well systematized facts, and considerations bearing upon the "Causation of Disease"

To still further concentrate our energies, I recommend that the special topics for this meeting be "*Malaria, and the Causation of Fevers*" One reason for this is that, even in the Northern State in which I live, intermittent fever (though causing few deaths), is reported as causing more sickness than does any other disease whatever

It would be of interest to know, for each State

1 The proportion of all sickness, that, by reputable practicing physicians, is attributed to malaria

2 Just what groups of signs and symptoms are accepted as evidence of the influence of malaria

3 To what extent sickness attributed to malaria is increasing or decreasing

4 What are the meteorological and other conditions coincident with the increase or decrease of malarial diseases?

5 What facts are there bearing upon the question? What is malaria?

6 What evidence is there for, or against a malarial germ?

Probably it will conduce to the advancement of our knowledge, if the member of this Committee in each State will collect facts, and, at the coming meeting report, or have some one report for his State, on the topics I have suggested, and upon any other subject which he may think important

Members of the Association that are pathologists, physiologists, bacteriologists, or chemists, will, I think, be especially welcomed if each, from his own standpoint, will discuss that part of the subject relative to the "Causation of Fevers" Statisticians may well give us the evidence that they are able to bring bearing on the topics suggested, and the busy practitioners that have the best opportunities for observing these diseases, will be expected to contribute their share

In case you prepare a paper, report, or for a discussion, I trust you will remember to conform to the rules of the Association, and be sure to inform the Secretary of the Section, S T ARMSTRONG, M D, Marine Hospital Service, New York City, concerning the title, and the time required, in order that the programme may provide for its presentation

It will give me pleasure to hear from you on the subject Very respectfully,

HENRY B BAKER,

Ch'n Section on State Medicine, Am Med Ass'n

Lansing, Michigan, December, 1887

MISCELLANEOUS.

SMALL SOCIAL VICES —A correspondent very sensibly directs attention to the influence exercised by some of the niceties of modern life upon the physical condition of young women at the present day Without adverting to such grave excesses as the free use of alcohol and of toxic remedies, he instances incessant tea drinking, sipping eau de cologne, and addiction to sensational novel reading as examples of the prevailing spirit of self indulgence There is considerable force in his observation that we may be disappointed in the result if girls, who have in these and similar matters been allowed to regard their wish as their ideal, should at any time have to resume the responsibilities of motherhood The practices to which he refers are, happily, counteracted in many cases by a native strength of mind and body, or by other habits of a more wholesome character Still, it must be allowed that they are not in themselves conducive, but rather injurious, to health They are part of a general tendency to luxurious living, which is not peculiar to one people, century, or sex, and to which we, as a prosperous commercial nation, have too readily become subject The means of correction are not to be found in Pharmacopœias or in regulations as to the safest methods of indulging the petty cravings of selfish desire The real remedy will be found in a return to simpler or less artificial usages, and in the increasing recognition of the value of some guiding purpose, even in the leisure and the diversions of our lives A general understanding of sanitary principles would also assuredly do much to assist the formation of a just estimate by the general public, of what is, and what is not, calculated to favor the healthy growth of mind and body These principles are now happily becoming better and more widely appreciated than formerly The evils associated with such vices of civilization as the social customs we have referred to stand, therefore, a fair chance of great limitation, if not of extirpation, when the verdict of common sense thus instructed will have been pronounced upon them —*Lancet*, Nov 26, 1887

A JUST JUDGE ON PATENT MEDICINES —Mr Justice Kay, in the Chancery Division, in the case of C A Vogeler & Co *v* Middleton, was asked to restrain the defendants from advertising and selling an oil as St Joseph's Oil, as being an infringement of the plaintiff's trade mark, and calculated to deceive the public Mr Justice Kay said that both plaintiffs and defendants were venders of quack medicines, which were largely advertised to heal all manner of external injuries He declined to rule that the use of any saint's name in the calendar was an infringement of the plaintiff's trade mark But lest either party should use his judgment as an advertisement, he hoped they would add that no one should employ either preparation except under medical advice The judge's counsel is excellent It is too much to expect that the parties to the suit will publish it But we gladly give it publicity and praise —*Lancet*, Nov 19, 1887

SALOL IN TYPHOID FEVER —Salol, in gr iij doses, every 3 hours, in typhoid fever, is highly recommended

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OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY, FROM DECEMBER 10, 1887, TO DECEMBER 16 1887

Major G M Sternberg, Surgeon, assigned to duty as attending surgeon and examiner of recruits at Baltimore, Md

Major P J A Cleary, Surgeon, assigned to duty at Ft Wingate, N M

First Lieut C L G Anderson, Asst Surgeon, assigned to duty at Ft McDowell, Ariz

Capt A W Taylor, Asst Surgeon, assigned to duty at Ft Robinson, Neb

Capt A H Appel, Asst Surgeon, assigned to duty at Camp at Highwood, Ill, relieving Asst Surgeon H O Perley

Capt H O Perley, Asst Surgeon, will rejoin his proper station (Ft Wayne, Mich) S O 285, A G O, December 8, 1887

First Lieut W B Bamster, Asst Surgeon, ordered to proceed at once from Ft Lowell, Ariz, to Ft Wingate, N M, and report to the commanding officer for duty S O 128, Dept Ariz, December 1, 1887

First Lieut J M Cabell, Asst Surgeon, ordered for duty at Ft Niobrara, Neb S O 286, A G O, December 9, 1887

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U S NAVY, DURING THE WEEK ENDING DECEMBER 17, 1887

Medical Inspector A Hudson, ordered to the "Trenton"

Medical Inspector N L Bates, detached from the "Trenton," and placed on waiting orders

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U S MARINE HOSPITAL SERVICE FOR THE WEEK ENDING DECEMBER 19, 1887

Surgeon R D Murray, granted leave of absence for fourteen days December 8, 1887

Surgeon J M Gassaway, granted leave of absence for fifteen days, to take effect when relieved December 17, 1887

Surgeon Fairfax Irwin, relieved from duty as Acting Chief Clerk, Office Supervising Surgeon General, and to wait orders

P A Surgeon S D Brooks, granted leave of absence for thirty days, to take effect when relieved December 15, 1887

Asst Surgeon W P McIntosh, to proceed to Wilmington, N C, for temporary duty December 13, 1887

Asst Surgeon G M Magruder, granted leave of absence for twenty one days December 19, 1887

Asst Surgeon P M Carrington, ordered to examination for promotion December 14, 1887

THE

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EDITED FOR THE ASSOCIATION BY N S DAVIS

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HOSPITAL NOTES.

WOMAN'S HOSPITAL, INDIANAPOLIS

A COLECTOMY, WITH NEW USE OF BERGEON'S METHOD

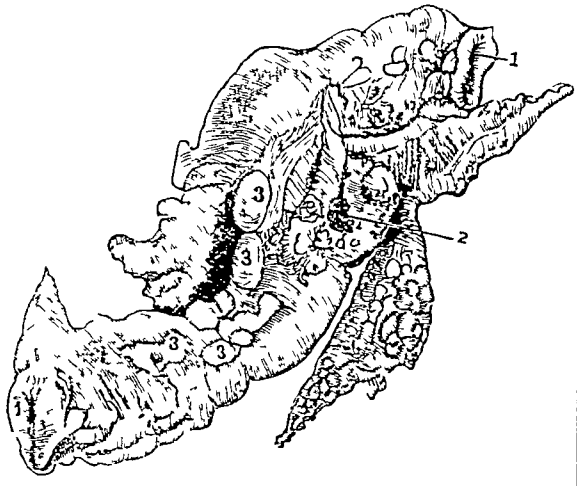
(Reported from the Service of Joseph Eastman, M D , by John F Barnhill)

Mrs B , under the care of T C Donnell, M D , Franklin, Ind , aged 20, mother of child 8 months old, referred to Dr Eastman in Sept , 1887 History of low general health for many months After birth of child obstinate constipation, resulting in almost complete obstruction Relieved only by gr ½ ext bella donna Noticed enlargement in left inguinal region

Examination *per vaginam* right ovary enlarged and tender Iliac enlargement seemed to have connection with uterus Over abdomen the tumor could be only indefinitely mapped out

Operation, September 27 — Incision in median line Ovaries examined Right one size of hen's egg, and was removed, pale, and fibroid in appearance Left ovary healthy Enlargement in left iliac fossa elevated from pelvic floor and brought higher into wound, was found to be a pathological condition of descending colon immediately above sigmoid flexure

Removal of diseased portion determined upon Section of gut made 2 inches above, and 2 inches below morbid boundary line No portion of mesentery removed Portion exsected, 8 inches long with appearance shown in figure, drawn by myself



1, 1 opening of superior and inferior ends 2 perforation by finger into calibre of gut, made by lifting it up it being in advanced state of degeneration 3 3 3 3 secondary growths from main tumor The wing like appendages of like character

Distal ends of gut approximated by Lembert's sutures No 10, iron dyed silk sutures were used, each suture passing deep, through muscle and submucosa of intestinal wall The operator had not then read the very able article of Dr Halsted, (See *American Journal Medical Sciences*, October, 1887 "Circular Suture of Intestine," by Wm S Halsted, M D , New York), but from anatomical knowledge of intestinal coats, knew the value of a suture, including the sub mucosa, which is the strength of the intestine Sutures taken one eighth inch apart around the whole intestinal circumference When the parts seemed well approximated, it occurred to the operator to test the work Bergeon's apparatus for making sulphuretted hydrogen gas being at hand, he ordered a bag of the gas generated, injecting a quantity *per rectum* Some escaped at the wound as could be easily determined by its odor More sutures were taken, and the gas test reapplied A small quantity again escaped, and other stitches were taken, gas now failed to escape, proving the edges well approximated

Glass drainage tube left in abdominal cavity Little shock followed Highest temperature at any time 99⅗° F Bowels acted on fourth day, again on fifth, and afterwards comparatively regular Drainage tube removed on fifth day In ten days patient sufficiently recovered to walk about the room, and in five weeks to return home So favorable seemed the convalesence, that the diagnosis of carcinoma, which had first been made, was now somewhat doubted by some Bowels acted perfectly well for eight weeks, when she ceased to do well and Dr Eastman was asked to visit her She was vomiting, exhausted, with abdominal cavity filled with ascitic fluid Drew off the fluid and two days later made incision into abdomen to learn more of condition The site of exsected bowel was normal From the pedicle of the ovary removed, sprang a vegetating mass as large as the first, which left no doubt as to its being carcinoma (Microscopic examination by Dr Rachael Hickey, of Chicago, showed the specimen to be carcinoma, of cylindrical celled variety)

Patient died four days later No autopsy Antemortem examination obviated its necessity, since the sutured bowel, mesentery, uterus and ovarian pedicle with its growth, were then examined sufficiently to warrant the statement that patient died from the disease extending, and that recovery from the operation was perfect

MEDICAL PROGRESS.

SUPPURATIVE PERITONITIS, OPENING, WASHING, AND SPONGING THE PERITONEUM, RECOVERY.—At the meeting of the Clinical Society of London, on October 28, MR RICHARD BARWELL read notes of this case The man, æt 42, accustomed to drink a good deal, was admitted into Charing Cross Hospital June 24, 1887 Six days previously he fell and struck the left lower part of the abdomen, but seemed very little hurt Five days afterwards he, in stooping, felt severe pain in the lower part of the abdomen, he vomited and passed a little very dark colored urine (Absence or presence of blood could not be verified) He went to bed, his abdomen swelled, he passed very little urine, vomited after, and sometimes without, taking food On admission he was placed in a warm bath, while in it he passed what may, he thinks, have amounted to a wine-glassful of urine At 2 P M Mr Barwell found him with pinched, anxious countenance, pulse small, hard, and quick, and temperature 100 4°, dry skin, tongue somewhat coated, vomiting, abdomen slightly tender, save in left iliac region, much swollen, very tympanitic quite down to the pubes, tapping it produced a peculiar thrill not like that of flatulence A No 12 catheter brought away no urine, even though pressed far back, but the instrument when withdrawn was full of urine deeply stained with blood June 25 On three occasions 10 ounces of urine had been passed, at first with blood, the last sample free of blood, but slightly albuminous, specific gravity 1022, temperature 89°, pulse 130, abdomen more distended It being evident that the man had a bad type of acute peritonitis, Mr Barwell opened the abdomen in the middle line below the umbilicus A large quantity of gas, not of feculent odor, escaped No rupture of any viscus was found, but in its lower part the peritoneum contained a quantity of thick pus There were no adhesions, parts of the intestines were congested, and the membrane was somewhat thickened Three sponges passed into the lower part of the cavity were withdrawn covered with tenacious flocculent pus A smooth nozzled glass funnel was then deeply introduced, and the part of the cavity washed out with 10 pints of distilled water, temperature 99°, bringing away quantities of pus and floccuh After sponging, a second smaller washing and sponging was directed to the upper part The abdomen was then sewn close without any drain The whole operation, including the anæsthetic and dressing, lasted an hour June 26 During the night and day the patient frequently vomited a brown fluid with darker concreta, pulse rather fuller, 110, abdomen scarcely distended, and tender only in immediate neighborhood of the wound He was lying flat, save for a small pillow under the knees, said he was quite well, and wanted to go home July 28 The vomiting slowly decreased during the night, the bowels acted rather copiously four times The vomiting ceased and all symptoms passed rapidly away The rest of the history was that of rapid convalescence, the man being very importunate in requesting to be discharged In his remarks Mr Barwell, referring to a paper by Mr Hancock, claimed for Charing Cross Hospital the first conception of the idea of opening the peritoneum for acute peritonitis (*Lancet*, 1848, "Meeting of Medical Society") He also pointed out that this operation had been performed fourteen times, though the operator had not always known what was the precise nature of the case, and the circumstances had been very various, ulcers or rupture of some part of the intestinal tract, or of an ovarian cyst He emphasized the impossibility of draining the lower part of the peritoneum through a wound in the front of the abdomen, and advised that no drainage-tube should be inserted immediately after operation, but that if distension recurred, to remove the lower stitches and permit escape The presence of a tube, which could not in that position act as a drain, might be injurious rather than beneficial In the female, drainage *per vaginam* would probably be the most valuable treatment as the best wash, since disinfectant lotions, strong enough to act as germicides, could not be brought into contact with any large surface of the peritoneum without injurious effects, local, systemic, or both —*British Medical Journal*, November 5, 1887

NITROGLYCERINE IN NEPHRITIS AND URÆMIA — DR S A LENTOVSKY, of the Cronstadt Marine Hospital, employed nitroglycerine (in tabloids containing each 1–100th of a grain of the drug) and hot water baths in four cases, three of which are given with minute details In two of the patients the daily amount of urine rapidly increased, while albuminuria and dropsy disappeared, and the patient's subjective feeling and general state strikingly improved In a third case the improvement was but fleeting, the patient dying after a short stay at the hospital The *post mortem* examination showed that he had not suffered from nephritis, but from an extensive amyloid degeneration of the kidneys and spleen The remaining case illustrates the beneficial action of nitroglycerine on uræmic symptoms The patient, a girl of 15, was brought in almost unconscious state, with general convulsions, frequent vomiting (the ejected matter smelling of urine), extensive dropsy, stertorous frequent breathing, and small pulse Nitroglycerine and hot baths having been at once ordered, on the next day the girl was able to sit up in her bed, ate with appetite, and generally felt comparatively well —*London Medical Record*, Aug 15, 1887

THE ALKALINITY OF THE BLOOD IN CERTAIN DISEASES —VON JAKSCH, of Graz, concludes that

1 Fever lessens, in greater or less degree, the alkalinity of the blood

2 This lessened alkalinity is a constant symptom in uræmia

3 Diseases of the liver, in which destruction of the parenchyma occurs, produce this condition

4 Leukæmia, pernicious anæmia, and chlorosis lessen the alkalinity of the bood

5 Poisoning with carbon dioxide produces this result also —*Zeitschrift fur klinische Medicin*, Band 13, Heft 3 and 4

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events or matters that it is desirable to call to the attention of the profession Letters written for publication or containing items of information should be accompanied by the writer's full name and address although not necessarily to be published All communications in regard to editorial work should be addressed to the Editor

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SATURDAY, DECEMBER 31, 1887

CLOSE OF VOLUME IX

The present number completes the ninth volume of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and four and one half years of its publication In complying with a By law of the Association which requires the publication of the full list of permanent members of the Association every three years, we have given the list in this number as furnished by the Secretary and Treasurer of the Association This list and the annual report of the Librarian for 1886, with a full index and title page for the volume, fill so many columns that we have but little space for other reading matter in this number As our next issue will constitute the first number of Volume X, now is a favorable time for new subscribers to send their orders for THE JOURNAL, and it is an equally favorable time for such old subscribers as are in arrears, to pay up And for all, whether new or old, we wish a *happy New Year*

ALCOHOLIC REMEDIES IN TYPHOID FEVER

A leading article in the *Medical News* of the 24th of December, 1887, in referring to "an outline of the modes of treatment in typhoid fever pursued at twelve of the chief hospitals of this country," says "The use of alcohol is recommended by all the writers, and we have, as yet, no substitute for it in the progressive asthenia of the disease" Before knowing how much value can be awarded to this apparently united testimony in favor of alcohol in typhoid fever, it would be necessary to know how many cases of the fever any one or all of the writers alluded to, have actually treated without alcohol, that they might have a fair basis of comparison of the results We have tried the experiment of treating typhoid fever and all other general fevers without using alcoholic remedies, both in hospital and private practice for thirty years, and have found no difficulty in finding better remedies for counteracting the asthenia of this fever, and obtaining a higher ratio of recoveries than has ever been obtained with its use With iodine as a general alterant and antiseptic to counteract the molecular degeneration in the tissues and the blood, and the choice of cardiac and vaso motor tonics from the class of remedies represented by digitalis, coffee, tea, strychnia, strophanthus, carbonate ammonia, camphor, etc, according to the special symptoms of each case, and vigilant attention to the local complications that are in many cases more dangerous to the patient than the general disease, with an equally vigilant attention to the proper administration of simple nourishment and pure air, we have no place or need for the use of alcohol as a remedy in these cases And of a considerable number of intelligent and active practitioners who have tried the same experiment, though for a less number of years, I have not yet found one who was not fully satisfied with the result

A B PALMER, M D, LL D, Dean of the department of Medicine and Surgery, and Professor of Pathology and Practice of Medicine in the University of Michigan, died on the evening of the 23d of December, 1887, aged 72 years By the death of Dr Palmer, the profession has lost one of its oldest and most honorable members A conscientious and skillful practitioner, an able writer, an earnest and successful teacher, and above all a most estimable citizen and Christian, for more than forty years he has filled an important place in the profession of this country One of the last prominent services he rendered the profession, was in ably discharging his duties as President of the Section of Pathology in the Ninth International Medical Congress, at Washington, D C, though in impaired health at that time Ripe in years and in fruitful labors, he has truly "entered into rest"

FRANK T ANDREWS, M A, M D, lecturer on Histology in the Chicago Medical College, has recently been appointed assistant physician in the gynecological department of the Mercy Hospital of Chicago

ADDITIONS TO THE LIBRARY FROM MAY 1, 1885, TO APRIL 29, 1886

Mr President —I have the honor to present the accompanying Catalogue of additions made to the Library of the Association by donations, exchanges and subscription during the past year The Catalogue shows that since my last report 232 distinct titles have been added, exclusive of a number of Transactions, Reports of Boards of Health and Medical Journals, foreign as well as domestic, not previously received and catalogued The average yearly increase of the Library from 1882 to 1885, the date of my last report, has been at the rate of about 120 distinct titles, so that there has been during the last year a gain of nearly 100 per cent in new titles The Library now contains 2491 titles, representing about 7030 volumes Owing to the absence of funds for binding, there are at present about 300 unbound volumes of periodicals, transactions, etc, on the shelves of the Library

Respectfully submitted,
C H A KLEINSCHMIDT, *Librarian*

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[The usual exchanges, foreign and domestic, college catalogues, State Society Transactions, etc, have been received, but their separate acknowledgement is omitted for want of space]

BOOK REVIEWS.

TREATISE ON HUMAN PHYSIOLOGY For the use of Students and Practitioners of Medicine By HENRY C CHAPMAN, M D, Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, etc, 8vo, pp xv—945 Philadelphia Lea Brothers & Co 1887 Chicago A C McClurg & Co

With the works of Dalton, Flint, Foster and Landois and Stirling in reach of the student and practitioner of medicine whose linguistic attainments go no farther than the English language, not to mention other works, one may well be surprised that one whose time is not wholly given up to physiological work "should feel it incumbent upon himself" to write a book on physiology The author of the work under consideration, after an experience of eight years as a professor of physiology, became convinced that students and practitioners of medicine feel the want—which is to say, the lack or absence—of a systematic work on physiology, based on comparative and pathological anatomy, clinical

medicine, physics, and chemistry, as well as upon experimental research If this be the ground upon which the book was written—the lack of such a work on physiology—then the author has not labored wisely, since no such want exists nor has existed since the appearance of Sterling's translation of Landois's masterly work two years ago, not to mention other good works on physiology

But while the author's excuse, or reason, for writing his book has no foundation in fact, the work is a good and acceptable one It is a safe work to place in the hands of a student, and it is a very readable book It would have been much less painful to the eyes of readers had the sheets been corrected by some one acquainted with French, Italian and German words and names The foot notes of the book bristle with mis spelled words and incorrect titles There is too much of such carelessness in our publications

As to the matter of Dr Chapman's book, it must be said unhesitatingly that it is good In reading it one is often reminded, by the style, of the lecture room the style is easy, and by its ease many pages of physiology, that must otherwise be rather dry, are made interesting The book does not need the author's apology for having written it As a matter of fact it is surprising that the author has written so good a book after so short an experience as a teacher

ANATOMY, DESCRIPTIVE AND SURGICAL By HENRY GRAY, F R S , etc The Drawings by H V CARTER, M D , etc , with additional drawings in later editions Edited by T PICKERING PICK A new American from the Eleventh English Edition Thoroughly revised and re edited by WILLIAM W KEEN, M D , etc , to which is added Landmarks, Medical and Surgical, by LUTHER HOLDEN, F R C S , with additions by WILLIAM W KEEN, M D 8vo, pp 1,100 Philadelphia Lea Brothers & Co 1887 Chicago A C McClurg & Co

The above is a copy of a portion of the title page of the last edition of the most popular work on anatomy ever written It is sufficient to say of it that this edition, thanks to its American editor, surpasses all other editions It is not the "Gray's Anatomy" of ten years ago The student of that day would scarcely recognize it, with the large number of new illustrations, the careful change of much of the text for the better, and the many colored illustrations With such a work in his hands the student can no longer complain that "anatomy is dry bones "

TEXT-BOOK OF THERAPEUTICS AND MATERIA MEDICA Intended for the Use of Students and Practitioners By ROBERT J EDES, A B , M D pp 532 Philadelphia Lea Brothers & Co 1887 Chicago A C McClurg & Co

The book before us is well printed and bound, and of convenient size We have, however, been disappointed at the brevity of the description of the physiological action of many drugs, even of very important ones This work must be looked upon rather as a brief handbook than as an exhaustive treatise It certainly cannot replace H C Wood's well known text book It is written in a pleasing, readable style, and so arranged that reference can be readily made to any subject

MISCELLANEOUS.

HEALTH IN MICHIGAN —For the month of November, 1887, compared with the preceding month, the reports indicate that pneumonia and erysipelas increased, and that typho malarial fever remittent fever, diarrhœa, dysentery, intermittent fever, and cholera morbus decreased in prevalence Compared with the preceding month the temperature in the month of November 1887, was considerably lower the absolute humidity and the day and the night ozone were considerably less, and the relative humidity was slightly more Compared with the average for the month of November in the nine years, 1879–1887, intermittent fever, typho malarial fever, consumption of lungs, remittent fever and diphtheria were less prevalent in November, 1887 For the month of November, 1887, compared with the average for corresponding months in the nine years, 1879–1887, the temperature was about the same, the absolute and the relative humidity were slightly less and the day and the night ozone were less

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of November, 1887, at 63 places, scarlet fever at 36 places, typhoid fever at 39 places and measles at 18 places Reports from all sources show diphtheria at 5 places more, scarlet fever at the same number of places, typhoid fever at six places less, and measles at six places more in the month of November, 1887, than in the preceding month

A DECISION AS TO COSTS IN SUITS FOR MALPRACTICE —For a considerable time a suit has been pending against a physician of Boston founded on a charge of malpractice involving some operative procedure for removal of the ovaries It has been tried four times The first three trials resulted in disagreement of the juries The fourth trial recently terminated in a verdict for the defendant But the item of most interest to members of our profession is that, at the opening of the last trial, the counsel for the defense applied for and obtained a decision of the Court, that all the costs of the four trials should be paid by the plaintiff, in case the final verdict of the jury should be in favor of the defendant The example thus furnished in this trial is worthy of the careful consideration of all judges before whom charges of malpractice are brought, a large proportion of which have no other foundation than a desire to extort money from the defendant sufficient to secure a good fee for the prosecuting counsel

ALBERT B STRONG, A M , M D , for twelve years Demonstrator of Anatomy in Rush Medical College, and Lecturer on Anatomy in the Spring Course, has severed his connection with the institution by resignation At a full meeting of the students of the college, resolutions were adopted highly complimentary of his ability and faithfulness as a teacher of anatomy, and expressing their regret on account of his severing his connection with the college

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U S ARMY FROM DECEMBER 17 1887, TO DECEMBER 23 1887

Capt Victor Biart, Asst Surgeon, relieved from further duty in Dept Dakota S O 293, A G O , December 17, 1887

First Lieut H S T Harris, Asst Surgeon, ordered from Ft McIntosh to Camp Pina, Colorado, Texas

First Lieut Paul Clendenin, Asst Surgeon, ordered from Camp Pina, Colorado, Tex , to Ft McIntosh, Tex S O 143, Dept Texas December 12, 1887

First Lieut Eugene L Swift, Asst Surgeon, ordered for duty at Ft Spokane, Wash Ter S O 293, A G O , December 17, 1887

List of Permanent Members of the

AMERICAN MEDICAL ASSOCIATION.

Acker George N, Washington D C 1881
Adair, L J Anamosa Iowa 1883
Adams, B I D Colorado Spr, Col 1876
Adams, Chas W Kansas City, Mo 1887
Adams, H F, Colton Cal 1885
Adams, J F A Pittsfield, Mass 1881
Adams, J R, Petersburg, Ind 1879
Adams, L D, Skiddy, Kas 1883
Adams, S S, Washington, D C 1881
Adams, W H, Fort Worth, Tex 1887
Adams Z B, Framingham Mass 1880
Ader Henry, Somerset, Ind 1875
Adolphus, P Chicago Ill 1884
Agard, Aurelius H Oakland Cal 1863
Agnew, Cornelius R, New York, N Y 1860
Agnew, D Hayes Philadelphia, Pa 1872
Aikins, W T, Chicago, Ill 1887
Aikman R Fort Scott Kas 1884
Ainey, David C, New Milford, Pa 1884
Ainsworth H R, Addison, N Y 1879
Albright F G, Lancaster Pa 1876
Alcorn, A W, Ravenna, O 1884
Alden C H, U S Army 1860
Alderson, John J, Chicago, Ill 1887
Alexander, C, Eau Claire, Wis 1877
Alexander, C T, U S Army 1886
Alexander, H W, Joliet Ill 1882
Alexander, J A, Citra, Fla 1881
Allee, W S Olean, Mo 1886
Alleman Horace, Hanover, Pa 1884
Alleman, Levi J, Boone, Iowa 1882
Allen, Charles L Rutland Vt 1853
Allen, Charles S, New York, N Y 1883
Allen, D Oberlin O 1887
Allen, Ezra P, Athens, Pa 1860
Allen, F W Barryville Mo 1886
Allen, J Adams Chicago, Ill 1877
Allen J M Liberty, Mo 1886
Allen, Nathan, Lowell, Mass 1849
Allen Thos J Shreveport La 1885
Allen W A, Donnelson Ill 1886
Allen W H, Richhill, Mo 1886
Alley, E H Toledo, Ohio 1876
Allport, W W, Chicago, Ill 1881
Alt A St Louis, Mo 1886
Alter M H Kittaning, Pa 1882
Alvord, A W, Battle Creek Mich 1882
Ames, Edward, Sherman, N Y 1880
Ames, John G, Palatka Fla 1887
Amwalt J W Greensburg Pa 1872
Anders James M Philadelphia, Pa 1884
Anderson, A J, Pawnee City, Neb 1886
Anderson J J Paw Paw Mich 1886
Anderson, Jas H New York, N Y 1884
Anderson, Wm Indiana, Pa 1868
Anderton W B, New York, N Y 1883
Andrew Geo L, La Porte Ind 1877
Andrews, Edm Chicago Ill 1851
Andrews, Judson B Buffalo, N Y 1884
Andrews, J J, Buffalo N Y 1887
Andrews John S Brooklyn, N Y 1878
Andrews, J W Mankato, Minn 1887
Andrews, R J Gardner, Mass 1878
Angear, J J M, Chicago Ill 1873
Anthony, W E, Providence, R I 1876
Antisell, Thomas, Washington D C 1884
Appley, W W, Cochecton N Y 1884
Archer, W A Houston Tex 1885
Archibald, O W, Jamestown, Dak 1878
Archinard, P E, New Orleans, La 1885
Armitage, D R Muncie, Ind 1881
Armstrong, C, Carrollton, Ill 1886
Armstrong, J M, Birmingham, Ala 1886
Armstrong, L G, Boscobel Wis 1876
Armstrong, S T, U S Marine Hospital Service 1885
Armstrong, W S, Atlanta Ga 1879
Arnold, A B, Baltimore, Md 1886
Arnold E S F, Newport, R I 1863
Arnold, G W Valparaiso Ill 1887
Arnold, John Rushville Ind 1875
Arnold, W W, Colorado Springs, Col 1883
Arthur, C S, Portland Ind 1883
Asdale, Wm James, Pittsburg Pa 1869
Ashby T A Baltimor, Md 1884
Ashmead William, Philadelphia Pa 1847
Ashton, Lawrence Falmouth Va 1831
Atkinson, R C St Louis, Mo 1880
Atkinson Wm B, Philadelphia Pa 1859
Atwood LeGrand, St Louis, Mo 1884
Auld, Jas H, Dallas, Iowa 1884
Auld, John M, Keota, Iowa 1887
Austin, Herman W, U S Marine Hospital Service 1881
Austin, Silas A Rockford, Ill 1884
Austin, W G New Orleans La. 1885
Avery, Geo W, Hartford Conn 1878
Avery, John, Greenville, Mich 1885
Ayer, Otis, LeSueur Minn 1882
Ayers, Samuel, Pittsburg, Pa 1884
Ayres, J H, Urbana, Ohio 1880

Babcock, R H, Chicago, Ill 1887
Bachman N E, Stanton, Mich 1883
Backus, Chas W, Three Rivers Mich 1872
Bacon, C P, Evansville, Ind 1874
Bacon Charles Giles Fulton, N Y 1855
Baer B F, Philadelphia Pa 1885
Paguley H B, Wheeling, W Va 1883
Bailey, Jonathan R, Olmstead, Ky 1858
Bailey, J W, Gainesville, Ga 1878
Bailey, Thomas P Georgetown S C 1884
Bailey, W, Louisville, Ky 1886
Bailey W C Albion, N Y 1880
Bailey, W G Chicago, Ill 1887
Bailhache P H, U S M Hosp Serv 1876
Bain, F D, Kenton, O 1884
Baird, Geo Wheeling, W Va 1884
Baird, W J El Paso, Tex 1885
Baker, Bascom, St George C H, W Va 1884
Baker, L L, Indianola, Iowa 1882
Baker, C W, Brooklyn, N Y 1885
Baker, Henry B, Lansing Mich. 1874
Baker, J H, Stockwell, Ind 1886
Baker, J E Lancaster, Pa 1887
Baker, J F, St Paul, Minn 1882
Baker, L H, Payson, Ill 1873
Baker, N B, Martinsburg, W Va 1881
Baker, N H Thomas W Va 1884
Baldwin, A D, Chicago, Ill 1882
Baldwin, E A, Chicago Ill 1886
Baldwin, H R, New Brunswick, N J 1880
Baldwin, L K, Philadelphia Pa 1884
Baldwin, Gilbert, Ruthven, Iowa 1887
Baldwin, G R, Ft Scott Kan 1885
Baldwin, W H, Sacramento, Cal 1887
Ball D R, Nelson, Neb 1884
Ballou J H, Haven, Kan 1886
Balmer A F Brookville, Pa 1883
Bancroft, Fred J, Denver Col 1878
Bangs, L L, New York, N Y 1880
Banker, A J, Columbus, Ind 1886
Banks, Gertrude Detroit, Mich 1880
Barber, R D, Worthington, Minn 1882
Barber W L, Waterbury, Ct 1884
Barber, W L, Waco Texas 1885
Barger, R N, Hopedale, Ill 1884
Barker, A Bertrand Mo 1886
Barker, A M, Buffalo, N Y 1885
Barker, H H, Washington, D C 1872
Barker, T Ridgway, Philadelphia, Pa 1887
Barlow L N, Chicago Ill 1887
Barnes H B, Ionia, Mich 1891
Barnes, Ira N, Decatur, Ill 1887
Barnes Lewis, Oxford, Ct 1883
Barnes T H, Waukon Ia 1882
Barnes, W T Fredericksburg, Ohio 1883
Barnum, E E, Waterport, N Y 1885
Barr, Geo W, Titusville Pa 1868
Barrett, J E, Wooster, Ohio 1883
Barrett W M Onargo Ill 1887
Barrett, Wm M, Boston, Mass 1880
Barroeta, G, San Luis Potosi Mex. 1885
Bartleson S P Clifton Heights Pa 1883
Bartlett, C K, St Peter's, Minn 1887
Bartlett, John Chicago, Ill 1887
Bartlett, Jno Knowlton Milwaukee Wis 1854
Barton, James M Philadelphia Pa 1878
Barton, P H Washington D C 1883
Barton R W Memphis, Tenn 188
Barton T J Zanesville Ohio 1883
Pash, J M Warsaw Ind 1887
Bass, Wm, Lowell, Mass 18,8
Bassett Moses F, San Jose, Cal 1864
Bates, H O, Chicago, Ill 1884
Bates, J H, Chicago, Ill 1887
Pates Mary E Chicago Ill 1887
Bates, Newton L Washington, D C 1884
Bates Syris T New Lebanon N Y 1885
Batcheller, D H Providence, R I 1883
Batten, J M Pittsburg Pa 1876
Pattey Robert, Rome, Ga 1875
Battles, W S, Shreve Ohio 1872
Baxter, Henry F, Philadelphia Pa 1880
Baxter, J H, U S Army, Washington D C 1878
Baxter, W H Wilton, Iowa 1870
Bayles George Orange N J 1884
Payley, Russell Las Vegas N M 1887
Bayne, J W, Washington D C 1886
Beach, J N, West Jefferson Ohio 1883
Peall, Elias J, Fort Worth Tex 1884
Beard, E W Vincennes, Ind 1883
Beardsley C E, Ottawa, Ohio 1874
Beasley, Geo F, LaFayette, Ind 1878
Beates, H Jr, Philadelphia, Pa 1885
Beatty, F B Omaha, Neb 1885
Becknell Irvin J Milford, Ind 1884
Becton, E P Sulphur Springs, Tex 1885
Bedient J, Kasson, Minn 1877
Beeler, George Clinton, Ky 1885
Beeman P Sidney, O 1883
Beggs, G W, Sioux City, Iowa 1882
Belden, A C Akron, Ohio 1883
Belfield, W T Chicago, Ill 1883
Belknap, S Niles Mich 1886
Bell, A Nelson, Brooklyn N Y 1860
Bell, Charles B, Suffolk, Mass 1887
Bell James Olathe Kas 1882
Bell John, Benton Harbor, Mich 1874
Bell, Samuel Beloit, Wis 1880
Bell William H Logansport Ind 1874
Benham J C, Hudson N Y 1884
Benjamin, Dowling, Camden N J 1884
Bennett, Alice, Norristown, Pa 1884
Bennett, E O, Wayne Mich 1884
Bennett I E, Plano, Ill 1883
Bennett, J H, Wauseon, Ohio 1876
Bennett, P R, Urbana, Ohio 1886
Bennett, I W, Jeffersonville N Y 1885
Benninghoff G E Kendall Creek Pa 1883
Bennitt, John, Cleveland, Ohio 1874
Berger, Lyman A, Kansas City Mo 1857
Berghoff John T, St Joseph Mo 1886
Berkebile, J K, Millstadt, Ill 1879
Berlin, J O, Bath Pa 1881
Berry, A K, Chillicothe Iowa 1887
Berry, Charles New Ulm Minn 1882
Berry J G, Chicago, Ill 1887
Berry, J J Portsmouth, N H 1887
Besharian John H Chicago, Ill 1884
Beshoar Michael, Trinidad, Col 1874
Best, John E, Arlington Heights Ill 1887
Bettman Boerne, Chicago, Ill 1887
Betton G W Tallahassee Fla 1876
Bevan C F, Baltimore, Md 1884

Bickham C J, New Orleans, La 1885
Biddle J Monmouth Ill 1886
Bigelow Horatio R Washington, D C 1884
Biggs H M New York N Y 1884
Bill, C H Bridgeport Conn 1883
Billin B H Shreveport La 1885
Billings Frank Chicago Ill 1884
Billings, John Shaw U S A Washington D C 1863
Bingham R H Oshkosh Wis 1887
Birch Thos J Port Carbon Pa 1883
Birdsall Gilbert N Brookfield N Y 1880
Birney Clavius C, Nora Springs Iowa 1882
Bishop Henry M S Brooklyn, N Y 1882
Bishop S P, Delta Ohio 1885
Bishop S S Chicago Ill 1885
Bishop Timothy H New Haven, Conn 1847
Bishop W T Harrisburg Pa 1884
Bittinger J H Hanover, Pa 1881
Bitz L B Blairsville Ind 1878
Bixby George Holmes Boston Mass 1875
Bizzell W D, Atlanta Ga 1885
Blachly, O L, Sparta Pa 1880
Blachly S L Sparta Pa 1884
Black Allen J, Fancy Grove Va 1885
Black John E Memphis Tenn 1885
Blackburn J F Ozark Ark 1883
Blackmer F A Albert Lea, Minn 1884
Blair A O Beulah Kas 1886
Blair A R York Pa 1880
Blair B H Cupid Ky 1885
Blair, H W Sheffield Ala 1807
Blair James F Linwood Ohio 1884
Blair W M Darlington Wis 1884
Blaisdell I C Wilmore Pa. 1883
Blake D B Cuero Tex. 1885
Blakeslee Edwin Anamosa Iowa 1873
Blanchard A. L. —— Mich 1886
Blanchard J A Des Moines Iowa 1882
Blanchard L. Edgewood Iowa. 1883
Bland D W Pottsville Pa 1876
Bliss Lyman W, Saginaw Mich 1874
Bloodgood Delavan U S Navy 1887
Bloomfield E M Peru Ind 1883
Blount C N Kokomo Ind 1884
Blount R. F Wabash Ind 1882
Blumberg A. Pittsburgh Pa 1884
Blumenthal, Mark New York N Y 1880
Boal G Y Borden Pa 1887
Boarman C V Washington, D C 1884
Bock A F St. Louis Mo 1886
Bodkin D G Brooklyn N Y 1876
Bogie M A Kansas City Mo 1882
Bogue R. G Chicago Ill 1887
Boise Eugene Grand Rapids Mich 1880
Boisniére L. Chas St Louis Mo 1886
Boker Chas S Philadelphia Pa 1864
Bombaugh C C Baltimore Md 1884
Bond C S Richmond Ind 1887
Bond Jas A Kansas City Mo 1886
Bond L L, Westside Iowa 1887
Bond M L, Aurora, Ind 1887
Bond Y H St. Louis Mo 1887
Bondurant A A Charleston Mo 1886
Bonebreak D W Martinsburg Pa 1883
Bonsteel A. S Corry Pa 1880
Bontecou Reed B Troy N Y 1878
Book, J B Detroit Mich 1853
Boor W A New Castle Ind 1870
Booth David S Sparta Ill 1887
Borck Edw St. Louis Mo 1876
Bossert, Jacob Washingtonville Ohio 1881
Boswell A J Andrews Ind 1884
Bosworth F H New York N Y 1884
Bottom M Breckenridge Mo 1884
Boulware G C Butler Mo 1885
Bourland O M Van Buren Ark 1885
Bowditch Henry I Boston Mass 1848
Bowen Asa B Maquoketa Iowa 1876
Boyce M C Hope Ark 1885
Boyd Jas P Albany N Y 1880
Boyd John M Knoxville Tenn 1857
Boyd Samuel Geo, San Francisco Cal 1885
Boyd S S Dublin Ind 1887
Boyden W J Muncie Ind 1883
Boys Wm Waverly Iowa 1882
Bozeman Nathan New York N Y 1884
Bozeman, Eli K. Friendship Ga 1884
Braceln E M Davenport, Iowa 1885
Brackett A B Goldfield Iowa 1882
Brady John Grand Rapids Mich 1874
Braffet J H Paw Paw Ill 1880
Braffet L Cleveland Ohio 1883
Brainard D S Stacyville Iowa 1882
Brunerd H G Los Angeles Cal 1885
Brallier E Chambersburg Pa 1876
Braman F N New London Ct. 1884
Bramble D D Cincinnati Ohio 1880
Brandes D C Erie Pa 1887
Brant A C Canton Ohio 1882
Brant T L Lakewood Ill 1883
Brashear J W, Bud Mo 1886
Brayton, F W Carey Ohio 1883
Brady John L, Dubuque Iowa 1884
Breakey, W F, Ann Arbor Mich 1877
Brechin, W Pitt Boston, Mass 1886
Breimig, P B, Bethlehem Pa 1865
Bremer, L, St Louis Mo 1886
Brendle Geo F Mahoney City Pa 1884
Brent, J W Tipton Mo 1886
Brewington, W J St Marys Ohio 1885
Brewster A D Pittsburgh Pa 1882
Brewster, J B Plymouth Mass 1880
Breyfacher A L, Little Rock Ark 1873
Brice R S Keota Iowa 1884
Brickell I H, New Orleans La 1885
Brickell, W E, New Orleans La 1885
Bricker W R Shelby Ohio 1883
Bridenstine, S J, Madison Neb 1883
Bridge N Chicago Ill 1886
Briggs A H, Buffalo N Y 1884
Briggs C F St. Louis Mo 1886
Briggs E C Boston, Mass 1883
Briggs, Wm Thompson Nashville Tenn 1869
Brigham, B A Chicago Ill 1867
Brigham O S Toledo Ohio 1883
Brinton John H Philadelphia Penn 1880
Brinton, W M Sharpsburg Pa 1886
Briscoe, W C Washington D C 1884
Brobst J C Lititz Pa 1884
Brockett A J Cleveland Ohio 1876
Brockhausen B E Lansing Iowa 1882
Brodie Wm Detroit Mich 1854
Bromwell J R., Washington D C 1884
Bronson Irad, Sedalia M 1887
Brooke, G W, Ellsworth Ohio 1883
Brooks D F, Minneiska Minn 1876
Brooks J C Concordia Mo 1885
Brooks J G Paducah Ky 1882
Brooks R F Carthage Mo 1886
Brookings D J Woodward Iowa 1885
Broome G W St Louis Mo 1886
Brophy T W Chicago Ill 1881
Brother Ferd Bunker Hill Ill 1876
Brow, Ewing Omaha Neb 1887
Brower D R. Chicago Ill 1877
Brown Bedford Alexandria Va 1884
Brown C B Sycamore Ill 1887
Brown C W, Elmira N Y 1876
Brown G C Macon City Mo 1882
Brown, Hawkins Hustonville Ky 1884
Brown Henry B Lincoln Ill 1887
Brown H W Waterloo Iowa. 1887
Brown, Isaac E, Detroit Mich 1876
Brown, J Decatur Ill 1886
Brown, Jas M Philadelphia Pa 1883
Brown J W Mottville N Y 1880
Brown, Luther, Postville, Iowa 1885
Brown R B Summerville Pa 1880
Brown Richard E Mt. Holly N J 1887
Brown Tinsley Hamilton Mo 1885
Brown U H Syracuse N Y 1880
Brown W E Gilbertville Mass 1887
Brown Wm M Lewiston Mo 1887
Brown W Owen Barton Vt 1855
Browne James Portland Ore 1884
Browne John Mills U S Navy 1881
Browning C C Adrian Ill 1887
Brownfield Jas H Fairmont W Va 1884
Brownson W G New Canaan Conn 1880
Bruebach G T, Ft Wayne Ind 1875
Bruehl, Gustavus, Cincinnati Ohio 1871
Bruen E T Philadelphia Pa 1880
Brumbaugh A B Huntington Pa 1884
Brumme Carl Detroit Mich 1874
Brumund, Peter, Idaho Springs Col 1887
Brundage, A H Xenia Ohio 1883
Brundage A T Factoryville Pa 1880
Bruner Daniel I Columbia Pa 1871
Brush E F Mt. Vernon N Y 1884
Brush E N Philadelphia, Pa 1884
Bryan David C Indianapolis Ind 1887
Bryan T N, Indianapolis Ind 1885
Bryant J D, New York N Y 1880
Bryson J P St Louis Mo 1886
Buchanan G W, Richmond Mo 1886
Buchanan J G Allegheny Pa 1882
Buchanan J J Pittsburgh Pa 1887
Bucher I R Lebanon Pa 1884
Buck H B Springfield Ill 1876
Buckby Wilson Philadelphia Pa 1884
Buckham J N Flint Mich 1883
Buckham T R Flint Mich 1874
Buckingham H B Clayton N J 1887
Buckingham John M Springfield Ohio 1884
Bucklin Daniel D Lansingburg N Y 1870
Bucklin G W New Albany Ind 1887
Buckner James H Cincinnati Ohio 1864
Bucknum A M Denver Col 1877
Buckwalter Leo M Greenville Ohio 1885
Buechner W L Youngstown Ohio 1882
Buffett L. Cleveland Ohio 1883
Buist, J Somers Charleston, S C 1884
Bulkley, J W, Washington D C 1878
Bulkley L. Duncan New York N Y 1874
Bullard, F B Chestnut, Ill 1886
Bullard, W N Boston Mass 1883
Bumstead J E, Dundee Ill 1887
Bunce Wm H Oberlin Ohio 1878
Bundy A D, St Ansgar Iowa 1886
Bunker E S Brooklyn N Y 1880
Bunn, James W, W Union Ohio 1884
Burchard I H New York N Y 1880
Burd Edwin, Lisbon, Iowa 1887
Burge J H Hobart Brooklyn, N Y 1857
Burge W J Pawtuxet R I 1880
Burgess A J Oshkosh Wis 1887
Burkart J L Big Rapids Mich 1887
Burke G W Newcastle Ind 1882
Burke John Laclede Mo 1884
Burke J L Linn Mo 1886
Burket, C W Warsaw Ind 1887
Burlingame D E Elgin Ill 1887
Burnham A I Ashland Ill 1886
Burr Chauncey S Mitchell D T 1883
Burr, A H Chicago Ill 1884
Burrall Fred A New York N Y 1872
Burrell D R, Canandaigua N Y 1878
Burroughs R Berrien Jacksonville Fla 1880
Burroughs S R Cuy's Store Texas 1885
Burtless W E St Clair Springs Mich 1884
Burton C W Mitchell Ind 1874
Burton H R Lewes Del 1884
Burton Mathew Henry Troy N Y 1869
Burts W Parton Ft Worth Texas 1885
Burwash T N Plainview Ill 1886
Burwell C N Buffalo N Y 1883
Busey Samuel C Washington D C 1870
Bush J Foster Boston Mass 1884
Bush, Lewis P Wilmington Del 1847
Bunn Jno L Dorchester Neb 1886
Butler D W Connersville Ind 1886
Butt Richard L Midway Ala 1879
Buttermore Smith Connellsville Pa 1874
Byford Henry T Chicago Ill 1874
Byford William H Chicago Ill 1854
Byrd D Ellis Marvell Ark 1885
Byrne Jas F Murfreesboro Tenn 1885

Cabell J L *University of Virginia* 1855
Cable J Spencer Ind 1886
Cadwalader C E Philadelphia Pa 1887
Caldwell Charles Chicago Ill 1885
Caldwell J J Baltimore, Md 1884
Caldwell *Jos R New Hamburg Pa* 1887
Caldwell W Fremont Ohio 1883
Caldwell W S Freeport Ill 1880
Calfee W H Waco Texas 1887
Calkins Marshall Springfield Mass 1886
Callender John H Nashville Tenn 1887
Campbell A P Kansas City Mo 1885
Campbell E R Bellows Falls Vt 1886
Campbell, Henry F Augusta Ga 1880
Campbell J F Callao Mo 1879
Campbell, J Y *Paxton Ill* 1886
Campbell W D Marshalltown, Iowa 1882
Cannon J W Jackson Mo 1887
Carhart John W Lampassus Texas 1877
Carolin Wm T Lowell Mass 1884
Carpenter, A E *Boonton N J* 1884
Carpenter Horace Salem Oregon 1876
Carpenter H W Oneida N Y 1860
Carpenter John T Pottsville Pa 1885
Carpenter Julia W Cincinnati Ohio 1878
Carr *Edmund C Cochecton Ohio* 1880
Carr, G W Providence R I 1887
Carrigan A N Washington Ark 1880
Carrington C Farmington Conn 1885
Carrington P M U S Marine Hospital Service 1872
Carroll D C Little Rock Ark 1886
Carson Jas Mt Vernon Iowa 1885
Carson Lewis O, Traders Point Ind 1884
Carson N B St Louis Mo 1884
Carson *Robert B Durant, Miss* 1886
Carstens J Henry Detroit Mich 1887
Carter Geo W Marshalltown Iowa 1886
Carter J M G Waukegan Ill 1882
Carter J O Lincoln Neb 1884
Caruthers Horace Tarrytown N Y 1884
Cary Frank Chicago, Ill 1880
Casal Francis M Pittsfield Ill 1887
Case A G Pittsburgh Pa 1880
Case H. R Grand Blanc Mich 1883
Casebeer J B Auburn Ind 1884
Casey F P Cleveland Ohio 1877
Cass John Hamilton Ohio 1883
Cass J W Batesville Ark 1883
Casselberry W E Chicago Ill 1886
Castle F E Waterbury Conn 1887
Caston Wm Corsicana Texas 1880
Cathcart C P Kansas City Mo 1885

Cathell, D W, Baltimore, Md 1884
Catlin, G E, Lake Geneva, Wis 1880
Catlin, E P, Rockford, Ill 1884
Cave, E S, Mexico, Mo 1886
Cavaney J, Milwaukee, Wis 1887
Chafee, W C, Huntingdon, Ind 1887
Chaillé, S E, New Orleans, La 1879
Chamberlain, C N, Lawrence, Mass 1876
Chamberlain, G M, Chicago Ill 1877
Chamberlain, M L, Boston, Mass 1880
Chamberlaine, J E M, Easton, Md 1880
Chamberlayne, J K, Utica, N Y 1880
Chambers, John, Indianapolis, Ind 1884
Chambers, John W, Baltimore, Md 1884
Chambers, Wm Mortimer, Charlestown, Ill 1852
Champlin, A Parker, Bay St. Louis, Miss 1887
Chancellor, Eustathius, St Louis, Mo 1887
Chancellor, J Edgar, University of Va 1875
Channing Walter, Brookline Mass 1880
Chapin, E B Grass Lake, Mich 1887
Chapman, G H, Grand Crossing Ill 1877
Charles, J E, Peoria, Ill 1887
Charlton, Samuel H Seymour Ind 1875
Chase, Dwight W, Delphos, Kan 1882
Chase, J, Denver, Col 1886
Chase, S B, Osage, Iowa, 1882
Chastain, E N, Hume, Mo 1887
Cheatham, Richard, Nashville, Tenn 1887
Cheatham Wm, Louisville, Ky 1886
Chenery, Elisha, Boston Mass 1885
Chenoweth, John T, Winchester, Ind 1887
Chenoweth, N T, Windsor, Ind 1886
Chenoweth, W J, Decatur, Ill 1872
Chessrown, A V, Pittsburgh, Pa 1878
Chew, John H, Chicago Ill 1877
Chilton, E Y, Howard Lake Minn 1886
Chilton, R H, Dallas, Texas 1885
Chipman, M M, San Francisco, Cal 1876
Chisolm J J, Baltimore, Md 1880
Chittock Gordon Jackson, Mich 1873
Choate J J, Oak Grove, Mo 1882
Christian, D, Springdale, Ark 1885
Christian E P, Wyandotte, Mich 1876
Christman, G W, Burnet Texas 1880
Chritzman, H G Welsh Run Pa 1884
Church, Rita B Williamsport, Pa 1884
Cisneros, Juan, New York, N Y 1880
Clagett Luther S Bloursville, Pa 1881
Claiborne J H, Petersburg Va 1881
Clapp Elmer F, Iowa City, Iowa 1884
Clark, B F, Cincinnati, Ohio 1887
Clark, E W, Grinnell, Iowa 1877
Clark, J K, Farmersville Mo 1886
Clark L A, Rockford, Ill 1884
Clark, L S, Philadelphia, Pa 1880
Clark M S, Youngstown, Ohio 1883
Clark Simeon Tucker Lockport N Y 1885
Clarke Almon, Sheboygan, Wis 1882
Clarke, Aug P Cambridgeport Mass 1680
Clarke, Rowan, Tyrone, Pa 1880
Clarke, W E, Chicago, Ill 1882
Clarkson, Henry M Haymarket Va 1884
Clay, H S, Augusta Mo 1886
Clay, N S, Manchester Iowa 1886
Cleaver, J H Council Bluffs, Iowa 1884
Clemens, J M, Louisville Ky 1886
Clements, C C, Springfield Mo 1885
Cleveland E F Dundee Ill 1880
Cuness Wm Robert Sacramento Cal 1871
Coakley, J B Buffalo, N Y 1883
Coan, Hiram L Northfield, Minn 1887
Cobb, C H Boston, Mass 1884
Cobb E A Carlin, Iowa 1887
Cobb W F, Mona Iowa 1882
Cochran Jerome, Montgomery, Ala 1884
Cock Thos F New York N Y 1848
Coe H W Mandan, Dak 1885
Coffee, J Turner, Steelville, Mo 1878
Coffman V H, Omaha, Neb 1882
Cohen J Solis Philadelphia Pa 1876
Coker Wm Wilson, Chicago, Ill 1886
Colburn J E Chicago Ill 1887
Cole Fred Garden City Kan 1876
Cole, N B Bloomington Ill 1884
Cole, R Beverly San Francisco, Cal 1871
Cole, Samuel Chicago Ill 1878
Cole, S V Winfield Kan 1887
Cole, W C, Attica Ind 1880
Cole, W C Jacksonville Ill 1886
Cole, W W, Allegheny Pa 1884
Coleman, A, Logansport, Ind 1876
Coleman, B L, Lexington Ky 1879
Coleman, H B, Columbus Mo 1886
Coleman J S, Augusta Ga 1880
Coles, Abraham, Scotch Plains, N J 1880
Coles, W, St, Louis Mo 1886
Collamore, G A, Toledo Ohio 1883
Collier, J M, Troy, Ala 1879
Collins, D B, Chicago, Ill 1887
Collins, James, Philadelphia, Pa 1868
Collins, Stacy B, New York 1883
Colvin, Darwin, Clyde, N Y 1878
Comegys, Cornelius G, Cincinnati, Ohio 1884
Comings, B M, New Britain Conn 1883
Conklin, S A, Canton, Ohio 1873
Conklin, W J, Dayton, Ohio 1878
Conley, A T, Cannon Falls, Minn 1883
Conn, G P, Concord, N H 1880
Connally L L, Atlanta, Ga 1879
Connell, J G, Pittsburgh, Pa 1882
Conner, J J, Palmer, Ill 1886
Conner, P S, Cincinnati, Ohio 1867
Connor, Leartus, Detroit, Mich 1874
Contant, Richard B, Tarrytown, N Y 1885
Cook, C C, David City, Neb 1885
Cook, Chas D, Brooklyn, N Y 1886
Cook, C P, New Albany, Ind 1886
Cook, Clark, Fowler, Ind 1885
Cook, E P, Mendota, Ill 1876
Cook, Geo F, Oxford, Ohio 1886
Cook, Geo J, Indianapolis, Ind 1886
Cook, Geo W, Washington D C 1887
Cook, John C, Hyde Park Ill 1887
Cook, J M, Muskegon, Mich 1887
Cook, S D, Sigourney, Iowa 1882
Cook, W C, Nashville, Tenn 1887
Cooke, A H, Chicago, Ill 1884
Cooke, Henry G, Holmdel, N J 1884
Cooke, Theodore, Baltimore, Md 1880
Coombs, John W, Peotone, Ill 1884
Coomes M F, Louisville, Ky 1887
Coop, W A H, Friendship Tenn 1882
Coope, A F, Oil City, Pa 1874
Cooper, Chas N, Cleveland, Tenn 1880
Cooper, John M, Wellsburg, W Va 1870
Cooper Wm S, Troy, N Y 1880
Cooper, Wm D Morrisville, Va 1884
Coover, D W, Harrisburg, Pa 1886
Coover, E H, Harrisburg, Pa 1877
Coover, F W, Harrisburg, Pa 1886
Copeland, Geo W, Boston, Mass 1885
Copeland, Wm L, Chicago, Ill 1887
Corbett, J F Weyauwega, Wis 1887
Corcoran, G L, Brimfield, Ill 1873
Corey, Lavanner Van Buren Ind 1881
Cormick, Boyd, Muscoutah, Ill. 1886
Corr, A C, Carlinville, Ill 1886
Correll, John W Baltimore Md 1878
Corson, Hiram, Plymouth Meeting, Pa 1847
Corson, J K, Jefferson Barracks, Mo 1886
Corson, O M, Middletown, Ohio 1881
Cortelyou, Peter R, Marietta, Ga 1887
Cosgrove, Thos Sylvania, Ohio 1883
Coskery, Oscar J Baltimore Md 1885
Cottrell, Jos F Washington, D C 1881
Cowan, Geo, Danville, Ky 1867
Cowan, J E, Galesburg Ill 1882
Cowden, J W, Rock Island Ill 1870
Cowles Edw Somerville, Mass 1878
Cox, G W, Clayton, Ill 1883
Cox, Wm M, Mt Sterling Ill 1883
Coxe, Timothy B, Frankfort, Ind 1884
Coyle, J M, Nashville, Tenn 1883
Cozad, Jas, Reynolds Ill 1883
Craft, J, Cleveland, Ohio 1876
Craig, Alexander, Columbia, Pa 1878
Craig, G G, Rock Island, Ill 1870
Craig, J W, Mansfield Ohio 1878
Craig, Norman S, Manchester Del 1878
Craig, S A, Freedom, Pa 1887
Craig, T E, Laurenceburgh Ind 1887
Crain, F M, Doland, Dak 1883
Crain, H F, Rutland Vt 1886
Crain, M R, Rutland Vt 1886
Crampton, O L, Mobile Ala 1887
Crang, Frederick, Watsonville Cal 1872
Crapo G W, Terre Haute Ind 1884
Crawford, A, Bardstown, Ky 1878
Crawford, G E, Cedar Rapids Iowa 1883
Crawford, J B, Wilkesbarre, Pa 1887
Crawford, J K, Cooperstown, Pa 1872
Crawford, J L, Greensburg Pa 1876
Crawford, J P, Davenport, Iowa 1883
Crawford, J Y, Nashville, Tenn 1887
Crawford Robt. Cooperstown Pa 1886
Crawford, S K, Chicago Ill 1878
Creel, M P, Central City, Ky 1887
Crego, F S, Buffalo N Y 1887
Criley, B H, Dallas Centre Iowa 1883
Croft, T G, Aiken S C 1878
Cronyn John, Buffalo, N Y 1870
Crook, J A Henderson Tenn 1878
Cross, Edward San Antonio Texas 1885
Cross, E W, Rochester, Minn 1887
Cross, W C, Tuscaloosa, Ala 1877
Crothers R W Delavan, Ill 1887
Crouse, D W, Waterloo Iowa 1885
Crouse J H, Dayton Ind 1874
Crow A M, Kansas City Mo 1882
Crow, J T, Carrollton, Ill 1887
Crummer, B F Warren Ill 1886
Culbertson, Howard Zanesville, Ohio 1882
Culbertson, R H, Brazil, Ind 1872
Cullen, Frank C, Chicago, Ill 1881
Cullimore, T M Jacksonville, Ill 1887
Cumins, S M, Elkhart, Ind 1883
Cunkle, L J, Madison Kan 1887
Cunningham, J G, Kittanning, Pa 1883
Cupples, Geo, San Antonio, Texas 1883
Curless, Wm, Truckee, Cal 1884
Currie, C E, Des Moines Iowa 1884
Currie, Daniel A, Englewood, N J 1887
Curtin, R G, Philadelphia Pa 1876
Curtman, Chas O, St. Louis, Mo 1880
Curwen, John Warren, Pa 1873
Cushing, E W, Boston, Mass 1870
Cushing, H K., Cleveland, Ohio 1886
Cushman, H, Blair, Neb 1878
Cutter, C K, Charleston, Mass 1884
Cutter, Ephraim, New York, N Y 1884
Czarnowski, O, New Orleans, La 1871
Czarnowski, O, New Orleans, La 1885

Dabney, T S, Washington D C 1885
Dabney, W C Charlottesville, Va 1875
Dagenais, A, Buffalo N Y 1884
Daggett, B H, Buffalo N Y 1886
Dahlberg, Alfred, Chicago, Ill 1887
Daily, F M, Scottsville Kan 1886
Dale, John R, Arkadelphia Ark 1884
Dalton, H C, St Louis, Mo 1887
Dalton J C New York, N Y 1884
Daly, Wm H, Pittsburgh, Pa 1876
Dancer, John S Milford, Ind 1887
Dancy, F W, Holly Springs Miss 1885
Dandridge, N P Cincinnati Ohio 1883
Danforth, I N, Chicago Ill 1886
Danforth M S, North Weare, N H 1884
Daniel, F E, Austin, Texas 1884
Daniels, Clayton M, Buffalo N Y 1884
Darby A B Waterloo Ind 1887
Darnall, G D West Union, Iowa 1882
Darr, H H, Caldwell Texas 1883
Darrah, A T, Bloomington, Ill 1877
Darrow, E M, Fargo, Dak 1887
Davidson, J P, New Orleans La 1885
Davies, David C, Columbia, Wis 1887
Davies, W H Maquoketa, Iowa 1887
Davis, E H, Plainfield, Conn 1884
Davis, F F, S Oil City, Pa 1883
Davis, G Pierrepont, Hartford Conn 1880
Davis, J D S, Birmingham, Ala 1884
Davis, L N, Farmland Ind 1883
Davis, Nathan Smith, Chicago, Ill 1847
Davis, Nathan Smith, Jr, Chicago Ill 1886
Davis, R. C, Seneca, S C 1884
Davis, S T, Lancaster, Pa 1881
Davis, W A, Camden, N J 1884
Davis, W C, Indianola, Iowa 1883
Davis, W E B, Birmingham, Ala 1885
Davison, Calvin K, Stanhope, N J 1886
Davison, F B Fleetville, Pa 1885
Davison, John B, Moline Ill 1873
Davison, J E, Negley, Pa 1887
Davisson H C, Hartford City Ind 1883
Davisson, J H Los Angeles Cal 1877
Dawley, Geo T, Royalton Wis 1887
Dawson, J O Lincoln, Neb 1883
Dawson, W W, Cincinnati Ohio 1875
Day, Henry L Eau Claire, Wis 1887
Day, R H, Baton Rouge La 1884
Dayton G H, Lima Ind 1880
Dean, D V, St Louis Mo 1873
Dean, H M Muscatine, Iowa 1876
Dearing T Haven, Braintree, Mass 1887
Deaver, J M, Buck, Pa 1884
DeCamp, Wm H, Grand Rapids, Mich 1867
Deering A A, Boone, Iowa 1878
Dekle, Thos S, Thomasville Ga 1887
Delany, J O F, St Louis Mo 1880
Dellenbaugh, C C, Portland Mich 1877
DeLong, W H, Emporium Pa 1884
DeMotte C W, Audubon Iowa 1883
Denise, J C Omaha, Neb 1886
Denney, Z Coleman Mt Vernon, Mo 1886
Denison Chas Denver Col 1875
Dennis, F S, New York, N Y 1882
Dennis S W, San Francisco, Cal 1886
Denson J C, Ludlow, Miss 1885
Dent W Marmaduke, Newburg W Va 1870
De Szigethy C A H, Los Angeles, Cal 1877
Detwiler B H, Williamsport, Pa 1886
Deveney, S C Chicago Ill 1884
Devine, J H, Sioux Rapids Iowa 1886
Devoe, J W, Wausau, Wis 1887
Devron, A J G, New Orleans, La 1885
DeWitt B, Oswego N Y 1876
DeWolf O C Chicago, Ill 1886
Dexter, R, Chicago Ill 1885
DeZouche, Isaac Gloversville N Y 1885
Dial, J J, Sulphur Springs, Texas 1885

Dibble LeRoy St Louis Mo 18 6
Dibrell J A Jr, Little Rock, Ark 1 5
Dickey, S Pana Ill 18 6
Dickinson D K, Lead City Dak 1885
Dickinson Fanny Chicago Ill 1887
Dickinson C K Jersey City N J 1886
Dickinson W St. Louis Mo 1 6
Dickinson W L East Saginaw Mich 1 9
Dickman F F, Ft Scott Kan 1874
Dickson W L, Rush Point La 1885
Didama Henry D Syracuse N Y 1 64
Diefenbacher P L, Havana Ill 1881
Dille C W Cooperstown Pa 1883
Dillon J Eureka Kan 18 6
Dissinger Hiram Canal Fulton Ohio 1887
Divelbiss John R Lacygne Kan 1886
Dixon C H St. Louis Mo 18 6
Dixon J N Springfield Ill 1887
Dodds F S Anna Ill 1882
Dodge H O, Boulder Col 1 7
Dodge L P Farmington Minn 1882
Dodson N M Berlin Wis 1872
Donaldson F F Wabash Ind 1 4
Donaldson John B Canonsburg Pa 1884
Donahoe Henry Jas Sandusky Ohio 1 56
Donelson C P Muskegon Mich 1885
Donelson H C Morrison Ill 1 37
Donges John W, Camden N J 1884
Donnelly M New York N Y 18 2
Dora J W Mattoon Ill 1873
Dorland Elias T Buffalo N Y 18 5
Dorland Jas Milwaukee Wis 1877
Dorland W I Lenwood Springs Col 1883
Dougall W Joliet Ill 1877
Dougherty Chas A South Bend Ind 1886
Dougherty P Chicago Ill 1887
Dougherty W W Liberty Mo 1887
Douglass T J Ottumwa Iowa 1887
Douglass W H Columbia Mo 1882
Dow James A Cambridge Mass 1884
Downey W I Verona Ill 1887
Doyle Gregory Syracuse N Y 1870
Doyle Thos H St Joseph Mo 1878
Drake A P Hastings Mich 1883
Drake F G Antrim Pa 1876
Drake Isaac L Lebanon Ohio 1883
Drake M E Mt. Alton Pa 1886
Draughan John A Nashville Tenn 1886
Drayer P Hartford City Ind 1882
Drew A M Clinton Ill 1886
Drewry J W Eufaula Ala 1885
Drysdale Thomas M Philadelphia Pa 1873
Dudley A Palmer New York N Y 1884
Dudley E C Chicago Ill 1883
Dudley F H Shell Rock Iowa 1882
Dudley C F St. Louis Mo 1886
Dudley H W Hillsboro Texas 1885
Duffield S P Detroit Mich 1883
Duffin W L Guttenberg Iowa 1887
Duhring L A Philadelphia Pa 1884
Du Hadway C Jerseyville Ill 1892
Dulles C W Philadelphia Pa 1884
Duncan B A West Point Miss 1884
Duncan J A Toledo Ohio 1883
Duncan J K L DeWitt Neb 1884
Duncan John H Kansas City Mo 1884
Duncan Wm E Ellendale Dak 1884
Duncan Wm S Brownsville Pa 1885
Dundor A B Reading Pa 1870
Dunglison Richard J Philadelphia Pa 1873
Dunkelberg R A Denver Iowa 1874
Dunlap Albert Fort Smith Ark 1887
Dunlap Alex Springfield Ohio 1885
Dunlap A S Chattanooga Tenn 1873
Dunlap Fayette, Danville Ky 1875
Dunlavy J Craig Harlan Iowa 1885
Dunmire George B Philadelphia Pa 1887
Dunn J C Pittsburgh Pa 1884
Dunn J H Minneapolis Minn 1884
Dunn O B Ironton Ohio 1882
Dunn S R Greenville Miss 1883
Dunn W A Boston Mass 1885
Dunning C W Cairo Ill 1884
Dunning E P Paw Paw Mich 1886
Dunning J D Webster N Y 1887
Dunning L H South Bend Ind 1885
Dunsmore F A Minneapolis Minn 1876
Dunsmore George St Albans Vt 1882
Dupree James W Baton Rouge La 1882
Durant G New York N Y 1882
Dutton C F Cleveland Ohio 1876
Du Val C A Houmer La 1882
Dwelly Jerome Fall River Mass 1885
Dysart L G Paris Mo 1884
1877

Earle Charles W Chicago Ill 1882
Earle C W Tully N Y 1878
Earle R W Columbus Wis 1884
Earley Chas R Ridgway Pa 1887
Eastland O Wichita Falls Texas 1885

Eastman, Joseph Indianapolis Ind 1873
Eastman I M Baltimore Md 1877
Eastman Wm, Mineral Point Wis 1882
Eckelman F C Elkhart Ind 1887
Eckley W F Harper Iowa 1887
Edie J O Grand Rapids Mich 1878
Edwards, Amos S Syracuse N Y 1884
Edwards, George A Syracuse N Y 1887
Edwards, John B, Manton Wis 1879
Edwards, Landon B Richmond Va 1877
Egan J C Shreveport La 1883
Egan W C Atlantic Iowa 1887
Ehlers John H Kansas City Mo 1880
Eggleston W C Chicago Ill 1887
Eidson J W Bourbon Ind 1881
Elder I S Indianapolis Ind 1885
Eldridge, I F New London Wis 1882
Eldridge Jas H I Greenwich R I 1880
Eliot, Ellsworth New York N Y 1884
Eliot Gustavus New Haven Conn 1884
Ellenberger J W Harrisburg Pa 1880
Ellegood Robert G Concord Del 1880
Ellenwood, A C Attica N Y 1886
Ellery W La Grange Mo 1881
Elliott, J M, Hickory Corners Mich 1884
Elliott J C Keystone Neb 1884
Elley M C Washington D C 1884
Elmer H W Bridgeton N J 1876
Elmer, Wm Bridgeton N J 1871
Elsner, John Denver Col 1882
Emack F D Phoenixville Pa 1886
Emerson, George Winfield Kan 1887
Emerson Justin F Detroit Mich 1882
Emery C W Minneapolis Minn 1884
Emmert Jos M Marengo Iowa 1887
Emmons J W Forreston Ill 1884
Enfield Americus Deerfield Ill 1886
Enfield Charles Jefferson Iowa 1876
Engelmann George I St Louis Mo 1887
Engert Kost H Chicago Ill 1870
English D C New Brunswick N J 1878
Ensign H D Boone Iowa 1877
Ensign W O Rutland Ill 1882
Epley I W New Richmond Wis 1880
Erdman W B Marengo Pa 1887
Ermine Lucy F, Royalton Wis 1887
Eschbach H Clay Monroe Iowa 1875
Essig N Fred, Spokane Falls W T 1879
Estabrook I F Rockland Me 1880
Estill W G, Vibbard Mo 1885
Etheridge J H Chicago Ill 1882
Evans, Earl Winchester N H 1896
Evans I B Greencastle Ind 1881
Evans E C Sedalia Mo 1891
Evans Edw L Philadelphia Pa 1882
Evans James Florence S C 1885
Evans O E Cowrie Iowa 1883
Evans, R P Franklin Ohio 1872
Evans Thos B Baltimore Md 1884
Evans Thos W Madison Wis 1884
Evans T R Burns Kan 1878
Evans Warwick Washington D C 1870
Evans W H Sedalia Mo 1880
Evans W W Oxford Ga 1879
Eve, Duncan, Nashville Tenn 1879
Eve Paul F Nashville Tenn 1882
Everhard N S Wadsworth Ohio 1884
Eversole F R St Louis Mo 1887
Everts O College Hill Ohio 1886
Ewing C C Aberdeen Miss 1879
Ewing D C Batesville Ark 1880
Ewing R B West Grove Pa 1881
Ewing W C Nashville Tenn 1886
Eyster, C L, Rock Island Ill 1886

Fabrique A H Wichita Kan 1886
Fackler G A Cincinnati Ohio 1886
Fairbank Henry C Flint Mich 1873
Fairbanks J R Amsterdam N Y 1880
Fairchild D S Ames Iowa 1882
Farnham Le Roy D Candor N Y 1882
Farnsworth P J Clinton Iowa 1873
Farrar M C St Louis Mo 1886
Farrelly E M Townville Pa 1883
Fasquelle Louis W St Johns Mich 1874
Fay John Altoona Pa 1858
Feigenbaum E W Edwardsville Ill 1886
Feigenbaum J H Alton Ill 1887
Felker J B Amboy Ill 1875
Fenger Christian Chicago Ill 1882
Fenn C M San Diego Cal 1885
Fenton Thos H Philadelphia Pa 1884
Ferguson E D Troy N Y 1882
Ferguson F C Indianapolis Ind 1887
Ferrell C B Columbus Ohio 1883
Ferrell H A Centreville Ill 1886
Ferris A B New Paris Ohio 1884
Ferro C M Tracy Minn 1882
Fessenden C S D U S Marine Hospital Service 1853

Fifield, M, Centreville R I 1880
Finarty J W Knoxville Iowa 1886
Findley Wm Martin Altoona, Pa 1869
Fink Isaac W Hillsboro Ill 1876
Finley W R Altoona, Pa 1883
Firestone I Wooster Ohio 1878
Firestone W W Wooster Ohio 1887
Fischel W E St Louis Mo 1884
Fischer Emil Philadelphia, Pa 1868
Fish W H Baylis Ill 1885
Fisher B H Steubenville Ohio 1883
Fisher Charles H Providence R I 1858
Fisher Theo W Boston Mass 1876
Fisk Geo F Chicago Ill 1887
Fisk M H Wauwatosa Wis 1882
Fitch C N Logansport Ind 1878
Fitch I P Charles City Iowa 1885
Fitch W H Rockford Ill 1878
Fite C C Knoxville Tenn 1884
Fitzgerald Wm Grand Mound Iowa 1887
Flanders J W Wrightsville Ct 1885
Flandrau Thomas M Rome N Y 1878
Fletcher C J Indianapolis Ind 1887
Fletcher W B Indianapolis Ind 1886
Flinn W D Redwood Falls Minn 1883
Flint Austin New York N Y 1860
Flint James M U S Navy 1878
Florentine F B Saginaw Mich 1886
Floyd R C Boulder Col 1877
Fly A W Galveston Tex 1882
Flynn Wm Marion Ind 1887
Focht Wm H New Riegel Ohio 1887
Folwell Mahlon B Buffalo N Y 1878
Fonte W I Lenoirs Tenn 1885
Foote D E Belvidere Ill 1878
Foote Jas S Wichita Kan 1886
Forbes Samuel F Toledo Ohio 1874
Forbes Wm Smith Philadelphia Pa 1884
Ford Corydon L Ann Arbor Mich 1874
Ford I C Nacogdoches Tex 1885
Ford J H Wabash Ind 1886
Fordyce Benj A Union Springs N Y 1882
Fordyce J A Hot Springs Ark 1886
Foreman J M Jonesburg Mo 1873
Forshee Thos W Madison Ind 1887
Forster Wm South Oil City Pa 1884
Fort J H Americus Ga 1885
Fortner B F Vinita Ind Ty 1876
Forwood W H U S Army 1879
Foss S A Pleasant Ridge Park Ky 1883
Foster A H Chicago Ill 1877
Foster Thos A Portland Me 1882
Foster W B Hope Ark 1885
Foster Wm S Pittsburgh Pa 1877
Foster Warren W Putnam Conn 1884
Foulkes Jas F Oakland Cal 1881
Foulks Chas A Chicago Ill 1887
Foulks M C Canton Ohio 1883
Fowler George R Brooklyn N Y 1880
Fowler S W Delaware Ohio 1883
Fox Charles J Willimantic Conn 1880
Fox D R Jesuits' Bend La 1885
Fox Lorenzo Smith Lowell Mass 1884
Fox L Webster Philadelphia Pa 1887
Fox Philip Madison Wis 1877
Fox Wm Milwaukee Wis 1876
Fox W R Colton Cal 1883
Francis C C Cleborne Tex 1885
Franfield W J Battle Creek Mich 1886
Frank C P Detroit Mich 1883
Franklin Chas H Union Springs Ala 1884
Franklin G S Chillicothe Ohio 1883
Franklin T M Plainfield N J 1885
Franks H P Losantville Ind 1886
Franzoni C W Washington D C 1872
Fraser W E Bismarck Dak 1884
Fraunfelter Joseph Canton Ohio 1883
Frazier W A St Louis Mo 1886
Fredrichs A G New Orleans La 1885
Free Spencer M Baltimore Md 1884
Freeland N H Tarrytown N Y 1876
Freeman B R Decatur Ind 1883
Freeman C M Leland Ill 1887
Freeman Ed D Osgood Ind 1884
Freeman J A Millington Ill 1882
Freeman J W Central City Dak 1885
Freeman S D Smethport Pa 1885
French G F Minneapolis Minn 1882
French James M Cincinnati Ohio 1883
French John O Hanover Mass 1854
French P Mexico Mo 1886
French S H Amsterdam N Y 1883
French Simeon S Battle Creek Mich 1877
French S W Milwaukee Wis 1883
Frew W C Coshocton Ohio 1887
Freyman Jokshan Herman Mo 1886
Fricke Albert Philadelphia Pa 1872
Friedrichs George J New Orleans La 1884
Friedrich Leon L Washington D C 1884
Friedenwald A Baltimore Md 1884

Trissell C M Wheeling, W Va 1883
Trost, Henry, Marshall, Va 1884
Trothingham, Geo E, Ann Arbor, Mich 1874
Trothingham, H H, Chicago, Ill 1887
Try, Chas N, Bracken, Ind 1887
Try, Frank R, St Louis, Mo 1887
Try, Henry D, Washington, D C 1884
Trye, Peter Y Oyster Bay, N Y 1880
Tryer, B E, U S Army 1878
Tulkerson, P S, Lexington Mo 1886
Fuller, A B, Loudonville, Ohio 1884
Fuller, A H, St Louis, Mo 1886
Fuller, A J, Bath, Me 1878
Fuller, D E, Hastings, Mich 1887
Fuller, F G, Lincoln, Neb 1884
Fuller, Horace S, Hartford Conn 1884
Fullerton, O J, Waterloo Iowa 1886
Fullerton, P J, Raymond Iowa 1885
Fullilove T W, Vaiden Miss 1085
Fulton, J C, Murray Ind 1887
Fulton, J F St Paul Minn 1883
Fundenberg, W F, Pittsburg, Pa 1884
Funkhouser R M, St Louis Mo 1884
Furney, E E, St Louis Mo 1880
Furniss, J P, Selma, Ala 1879

Gable Isaac C York, Pa 1880
Gabriel, J F Piqua, Ohio 1883
Gaddis Lewis Uniontown Pa 1884
Gage, Ellen C Winnetka Ill 1887
Gage, M R Sparta Wis 1881
Gahan, M J, Grand Island, Neb 1882
Gaines, J H, Little Rock Ark 1885
Galbraith, W J, Omaha, Neb 1886
Gallaher, Thos J, Pittsburgh Pa 1866
Galloway, Hector Fargo Dak 1884
Galloway, W T, Eau Claire, Wis 1884
Galt, Thomas Rock Island Ill 1873
Gamble, M I, Farmington, Ill 1887
Gamble, Thos D, Wheatland, Iowa 1882
Gapen, Clark, Madison, Wis 1882
Garcelon, Alonzo, Lewiston, Me 1873
Gardener, Chas, Emporia, Kan 1883
Gardner, C I, Providence, R I 1880
Gardner, Ira K, North Hampton Iowa 1882
Garfield, Leonard K, Algona, Iowa 1887
Garlach, F R, Racine, Wis 1884
Garland George M, Boston, Mass 1885
Garner, E S, St Joseph Mo 1886
Garnett, Alex Y P Washington, D C 1852
Garnett, H F, Keytesville Mo 1886
Garnett, Judson W Greenville, Tex 1886
Garratt, Alfred C, Boston Mass 1876
Garrish, John Pool, New York, N Y 1853
Garrott, Erasmus, Chicago Ill 1887
Garwood A, Cassopolis, Mich 1887
Garver, John J, Indianapolis, Ind 1884
Gaston J McF Atlanta, Ga 1886
Gaut, J O K Plattsburg, Mo 1880
Gavin M F, Boston, Mass 1884
Gawne A J Sandusky, Ohio 1883
Gay Norman Columbus, Ohio 1884
Gazzo John B C, Thibodeaux, La 1884
Geddings, W H Aiken S C 1877
Gehrung E C, St Louis Mo 1886
Geiger Jacob L, St. Joseph, Mo 1878
Gemmill, J M, Jr, Tyrone, Pa 1884
George, Basil Enterprise, Miss 1885
Gerhard J Z, Harrisburg, Pa 1878
German, W H, Morgan Park, Ill 1887
Getz, H Landis, Marshalltown, Iowa 1882
Ghent, H C, Belton, Texas 1882
Gibbon, W H Charlton, Iowa 1885
Gibbons, Jas E, Baltimore, Md 1884
Gibbons W P, Alameda, Cal 1886
Gibbs, J W, Scranton, Pa 1884
Gibbs, L H, Scranton, Pa 1881
Gibbs, Wallington S, Omaha, Neb 1884
Gibney, V P, New York, N Y 1881
Gibson, J St P, Staunton, Va 1881
Gibson, L P, Little Rock, Ark 1885
Gibson, R D, Youngstown, Ohio 1883
Gibson, Wm, Alexandria, Va 1884
Giddings, A W, Anoka, Minn 1884
Giddings, Thos, Housatonic, Mass 1876
Gifford, William R, Toledo, Ohio 1884
Gihon, Albert Leary, U S Navy 1876
Gilbert, J H, Quincy, Mass 1876
Gill, C F, St Louis Mo 1886
Gillespie, G B Covington, Tenn 1886
Gillett, J S, Rich Hill, Mo 1886
Gillett, O F, Denver, Col 1884
Gilliford, R H, Allegheny Pa 1883
Gilman, A O, St Cloud, Minn 1882
Gilman H A, Mt. Pleasant, Iowa 1885
Gilman, J H, Lowell, Mass 1881
Gilmer, Thos L, Quincy, Ill 1886
Gilmore, John N Gaston, Ala 1885
Gilson, Geo S, Shipman Ill 1887
Gladden, R B, Purdy, Mo 1886
Glasgow, F A, St Louis, Mo 1886
Glasgow, W Carr, St Louis, Mo 1875
Glass, J H, Utica, N Y 1880
Gleitsmann, D W, New York N Y 1879
Glenn, Jos O Shannondale, Mo 1886
Glenn, J W Nashville, Tenn 1880
Glisan, R, Portland, Oregon 1884
Glover, E L, Terre Haute Ind 1883
Gobin, G A Kirksville, Mo 1886
Goble, Liza T, Carlville, Ill 1887
Gobrecht Wm H, Washington, D C 1838
Godbey, Milton, Salem Mo 1886
Godding, Walter W Washington D C 1884
Godfrey, L I B, Camden, N J 1881
Godfrey, Henry T Galena, Ill 1887
Godfrey, John, Louisville Ky 1887
Godfrey, John, New Orleans, La 1885
Golden, C B, Marshfield Ore 1885
Goldsborough Chas B, Chicago, Ill 1887
Goldspohn Albert, Chicago, Ill 1885
Good A H, Selma, Ind 1885
Goodbrake C Clinton Ill 1876
Goodell, W Philadelphia Pa 1872
Goodman, H L, Philadelphia Pa 1875
Goodman, Sanford F, Maxwell Iowa 1880
Goodrich, Charles F, New Haven, Mo 1880
Goodrich E C, Augusta, Ga 1880
Goodwin, Albert Eufala Ala 1885
Gordon, J A Quincy Mass 1883
Gordon Seth C Portland Me 1883
Gordon, Thos W, Georgetown, Ohio 1875
Gordon W A, Chester, Ill 1886
Gore, D C, Paris, Mo 1887
Gorgas, Albert C U S Navy 1875
Gorgas, F J S, Baltimore Md 1885
Gorgas, Lawrence D L Bath Md 1887
Gould Edith M, Des Moines Iowa 1887
Gouley, J W S, New York N Y 1873
Govan, Wm Stony Point N Y 1860
Gove Geo S Whitefield, N H 1884
Gradle, Henry, Chicago, Ill 1887
Graefe, Charles Sandusky Ohio 1884
Graetlinger, A, Milwaukee Wis 1876
Graham A W, Holstein, Mo 1885
Graham, D W, Chicago, Ill 1886
Graham J W, Denver, Col 1886
Graham, Samuel, Butler Pa 1878
Graham, Thos A Wichita, Kan 1886
Gramger, W H, East Boston Mass 1882
Crammar, R B, Fort Worth Texas 1886
Grant, H H, Louisville, Ky 1886
Grant, W W, Davenport, Iowa 1873
Graves, Eli E, Boscawan, N H 1884
Graves, S, St Louis Mo 1886
Gray C S, Fayetteville, Ark 1886
Gray, Joseph L, Chicago Ill 1886
Grayston, B H B, Huntingdon Ind 1884
Grayston, F C S Huntingdon Ind 1882
Green, Dora, Chillicothe, Mo 1887
Green, Earl Mt Vernon Ill 1886
Green, James B, Mishawaka, Ind 1887
Green, J J, Pittsburg, Pa 1883
Green, James S Elizabeth, N J 1872
Green, J W, Marengo, Ill 1887
Green, I W, Shelbyville, Ind 1882
Green Traill Easton, Pa 1863
Greenawalt, G L, Ft Wayne Ind 1883
Greene, Geo H, Marshall Mich 1886
Greene, Jos C, Buffalo, N Y 1884
Greene W C, St Louis Mo 1886
Greenleaf, Daniel C, Bloomfield, Iowa 1887
Greenley, T B West Point, Ky 1877
Greenshields Wm, Romeo Mich 1874
Gregg, Jas S, Fort Wayne Ind 1867
Gregg, Vincent H, Connelsville, Ind 1883
Gregory, E H St Louis, Mo 1872
Griffin, C C, Vinton, Iowa 1877
Griffith, B M, Springfield, Ill 1882
Griffith, J D, Kansas City Mo 1886
Griffiths, Geo W Louisville Ky 1887
Grimes, Geo J Columbus, Ga 1879
Grimes, W S, Wapello, Iowa 1882
Grimstead W F Charleston Mo 1885
Grindon, Joseph, St Louis, Mo 1886
Grisier, F G, Collins, Ind 1886
Grissom Eugene, Raleigh, N C 1872
Griswold, E, Sharon, Pa 1872
Griswold J B, Grand Rapids, Mich 1876
Griswold, S C, New Haven, Mo 1886
Griswold S H Rutland, Vt 1887
Groner F J Big Rapids Mich 1884
Gross Onan B, Camden, N J 1880
Gross Samuel W Philadelphia, Pa 1880
Grove, J H Philadelphia, Pa 1867
Gudden Bernard C, Oshkosh, Wis 1887
Guenther, Julius, Quincy, Ill 1884
Guernsey A H, Amherst Wis 1887
Guhman N, St Louis, Mo 1886
Guibor, Chas H, Beloit Kan 1884
Guice, N L, Fayette Miss 1884
Guittard, F J, New Bedford, Ohio 1885
Gundrum F, Ionia Mich 1880
Gunnell F M, U S Navy 1876
Gunsaulus, F Columbus, Ohio 1887
Gutch, Wm, Albia Iowa 1876
Guth, M S, Warren Pa 1883
Guthrie, A, Cairo, Ill 1882
Guthrie, H R Sparta, Ill 1880
Guyton, B A, Jr, Sioux City, Iowa 1882

Hackett, C J, Le Mars, Iowa 1882
Hackney Jacob S Uniontown, Pa 1887
Hadra, Berthold E, San Antonio, Tex 1885
Hadsel, H S, Maynard, Iowa 1887
Hagan, M Los Angeles Cal 1885
Haggard, W D Nashville, Tenn 1885
Hagner, C E, Washington, D C 1881
Hagner, Daniel R Washington D C 1884
Haigh, Thos D Fayetteville, N C 1883
Haines, W S, Chicago, Ill 1887
Hakes, Harry Wilkesbarre, Pa 1880
Halberstadt, A H, Pottsville Pa 1876
Halbert, Oliver J, Waco Tex 1883
Haldeman F D Ord, Neb 1884
Hall Calvin C, Montrose Pa 1864
Hall, C Lester Marshall, Mo 1882
Hall, G P, Galveston Tex 1885
Hall, J C, Anguilla, Miss 1877
Hall, J C, Monroe, Wis 1882
Hall John C Frankford Pa 1885
Hall, Julius W Chicago, Ill 1887
Hall, Lemuel T, Potosi Mo 1883
Hall R N, Chicago, Ill 1857
Hall, Robert S Chicago, Ill 1887
Hall R W, Moundville, W Va 1883
Hall Wm A, Fulton N Y 1885
Hallam, J L, Centralia Ill 1885
Haller, F B, Vandalia Ill 1859
Halley, C R, Forristell Mo 1880
Halley, Geo, Kansas City, Mo 1878
Halley, J J, Benton City Mo 1886
Hamilton, B F, Emlenton, Pa 1883
Hamilton, C orge, Bachelor Mo 1882
Hamilton, Horatio A Perrysburg Ohio 1887
Hamilton, Increase S Tecumseh Mich 1874
Hamilton, John B Washington, D C 1883
Hamilton, J W, Columbus, Ohio 1880
Hanawalt, G P, Des Moines Iowa 1878
Hanawalt H O, Galena Kan 1882
Harck E F St Louis Mo 1886
Hancock, J T Shuqualek, Miss 1884
Hani, W F, Middlebury, Ind 1878
Hanna, Isaac W Milwaukee, Wis 1887
Hanna, Le Roy M, Putnam Ind 1886
Hanna, Rebecca Red Oak, Iowa 1886
Hanna W M, Henderson, Ky 1873
Hannon, J C, Hoosick Falls, N Y 1880
Hansmann Theodore, Washington, D C 1868
Hard, E G, Medina Ohio 1882
Hardee, P R, Moriah, N C 1886
Hardin, Robert A Nashville, Tenn 1884
Hardman, L G, Harmony Grove Ga 1883
Hargrove, W S, New Salem, Ind 1885
Hardy, H T Kaneville, Ill 1887
Harlan, A W Chicago Ill 1884
Harmon, J, Warren, Ohio 1883
Harper, H F, Merom, Ind 1876
Harper, J E, Chicago, Ill 1882
Harris, B H, Groveland, Ill 1884
Harris, Whitson A, Somerville, Tenn 1886
Harrison, E B Napoleon, Iowa 1874
Harrison, Geo Byrd, Washington, D C 1884
Harrison, Geo T, New York N Y 1881
Harrison, G W, Bernalillo, N M 1886
Harsha, Wm M, Decatur Ill 1887
Hart, B F, Brownsville, Mo 1886
Hart, Chas S, Lincoln, Neb 1886
Hart, Hugh A Wooster, Ohio 1884
Hart, H W, Council Bluffs, Iowa 1882
Hart, Ira F, Elmira, N Y 1878
Hart, R J, Low Moor, Iowa 1882
Hart W P Nashville, Ark 1885
Hartigan, Jas E, Washington, D C 1884
Hartley, J D San Francisco Cal 1884
Hartman J H Baltimore, Md 1884
Harvey, J G, Blue Mound Ill 1886
Harvey, O F, Wilkesbarre, Pa 1880
Harvey, T B, Indianapolis, Ind 1879
Harvie, L E, Danville Va 1881
Harwood, E C, New York, N Y 1872
Haskell W A, Alton Ill 1877
Hatfield, M P Chicago Ill 1884
Hathaway, Harrison, Toledo, Ohio 1883
Hausman, Wm, Elmore, Wis 1878
Haven, A C, Lake Forest, Mo 1886
Hawes, Jesse, Greeley, Col 1882
Hawkins A S, Carsville, Mo 1886
Hawkins, J W, Glasgow, Mo 1886
Hawkins, S B Americus, Ga 1884
Hawkins, T H, Denver Col 1886
Hawkins, W H, Texarkana, Ark 1879

Hawley Robt N, Milwaukee Wis 1887
Hawn E, Leetonia Ohio 1884
Hay Thos. Philadelphia Pa 1866
Hay Walter Chicago Ill 1888
Hayden Albert Shellsburg, Wis 1887
Hayden A M Evansville Ind 1886
Hayes J W, Marsiana, Ark. 1885
Hayes P S Chicago Ill 1885
Hayman L H, Boscobel, Wis 1887
Hayner Jennie G Chicago Ill 1887
Hays G C, Hillsboro Ind 1880
Hays I Minis Philadelphia, Pa 1881
Hays W C Bowie, Texas 1885
Hayward John C, Marshfield Wis 1887
Haywood Hubert Raleigh N C 1881
Hazel John B Clay Pool Ind 1887
Hazen E H Davenport Iowa 1872
Hazlewood Arthur Grand Rapids Mich 1884
Healy Thos M Cumberland Md 1884
Heard, Thos Jefferson Galveston Tex 1867
Hearn W Jos. Philadelphia, Pa 1884
Hearne J C Hannibal, Mo 1880
Hebard E V Grand Rapids Mich 1884
Heddens, Jas W St Joseph Mo 1884
Hedges Thos. M Grinnell Iowa 1884
Heghway Archibald E, Cincinnati O 1858
Heighway A E Jr Cincinnati Ohio 1886
Heighway S C Cincinnati Ohio 1885
Heilman R P Emporium Pa 1886
Heise, O N Cincinnati Ohio 1886
Helm, John H Peru Ind 1871
Helms B R Henderson Ky 1886
Hemenway H B Kalamazoo Mich 1885
Hench John B Hinsdale Ill 1887
Henderson C R Deasonville Miss 1885
Henderson, Jas P Newville Ohio 1856
Henderson J P Salem Ind 1887
Henderson R T Shawneetown Mo 1886
Hendrick H C McGrawville N Y 1876
Hengst, D A Pittsburgh, Pa 1883
Henley A Fairmount Ind 1877
Henry F P Philadelphia Pa 1880
Henry Morris H New York N Y 1883
Henry R F Princeville Ind 1886
Henry S L New Orleans La 1878
Henry W C Aurora Ind 1883
Hensler Ernst West Franklin Ind 1886
Hensley John W Yates City Ill 1887
Hepler B F, Ft. Scott Kan 1885
Herdman W J Ann Arbor Mich 1883
Herff F, San Antonio Tex 1885
Hermany P Mahanoy City Pa 1883
Herndon Z B Richmond Va 1881
Herr A J Lancaster, Pa 1881
Herr H S Westfield Ind 1885
Herr M L Lancaster Pa 1880
Herrick H J Cleveland Ohio 1877
Herriott E L Jacksonville Ill 1886
Hertzog W F, Allentown Pa 1885
Hervey J W Indianapolis Ind 1885
Hervey Wm G Detroit Mich 1887
Hess Elizabeth Iowa City Iowa 1885
Hess L P Marion Ind 1887
Hester W W Anna Ill 1880
Hewitt C N Red Wing Minn 1882
Hewson Addinell Philadelphia Pa 1885
Hibberd Jas Farquhar Richmond Ind 1864
Hickman Henry St. Louis Mo 1827
Hickman L B Hopkinsville Ky 1885
Hickman Thos G Vandalia Ill 1884
Hicks W Scott Bristol N Y 1885
Hidershide Geo N Arcadia Wis 1881
Higgins C B Peru Ind 1883
Hildreth C C Zanesville Ohio 1883
Hill Chas Pine Island Minn 1882
Hill Edwin A East Killingly Ct 1864
Hill E D Plymouth Mass 1881
Hill Gershom H Independence Iowa 1882
Hill Hampton E Saco Me 1885
Hill H D Augusta Kan 1884
Hill Levi G Dover N H 1883
Hill Nancy M Dubuque Iowa 1876
Hill N S Neville Ohio 1887
Hill R J St. Louis, Mo 1886
Hill S V D, Macon Miss 1884
Hiller H K Nashville Tenn 1885
Hillis David B Keokuk Iowa 1886
Hills T Morton Willimantic Ct 1887
Hilton Geo V Paw Paw Mich 1870
Himes Isaac N Cleveland Ohio 1887
Hiner S B Lima Ohio 1876
Hinkle A G B Philadelphia Pa 1883
Hinkle J R Sullivan Ind 1872
Hinkley Livingston S Newark N J 1876
Hinsey J C Ottumwa Iowa 1887
Hinton J H New York N Y 1882
Hinton S A Petersburg Va 1876
Hitchcock F E Rockland Me 1881
Hitchcock Homer O Kalamazoo Mich 1880
Hitzrat H W, McKeesport Pa 1863
Hixson M M Dupont Ohio 1887
Hoadley A E Chicago Ill 1883
Hobart, A J Clinton Iowa 1886
Hobbs A F, Arlington Ky 1882
Hobby, C M, Iowa City Iowa 1885
Hobday W A, Altoona Pa 1884
Hodge Jos A, Henderson Ky 1883
Hodges F F Indianapolis Ind 1859
Hoelige A, Cincinnati Ohio 1887
Hoff J W Pomeroy Ohio 1875
Hoffman, Jos H, St Marys Pa 1883
Hoffman R C Oskaloosa Iowa 1884
Hogan S M Union Springs Ala 1886
Hogeboom C E Baraboo Wis 1885
Holden R T Washington D C 1882
Holderness, L P G Clencoe Ill 1884
Holiday J W, Burlington Iowa 1835
Holland C I Keytesville Mo 1886
Holland, D J, Atchison Kan 1886
Holland, J W Philadelphia Pa 1886
Holland, Thomas F St Louis Mo 1887
Holley S I Nantucket Mass 1880
Holliday D C New Orleans La 1885
Holliday William S Monmouth Ill 1885
Hollister John H Chicago Ill 1887
Holman W J Cedar Rapids Iowa 1873
Holmes I A Orono Minn 1882
Holmes I J Chicago Ill 1886
Holmes H R, Salem Oregon 1877
Holmes J D Audubon Iowa 1880
Holt W F Boston Mass 1882
Holt W F Macon Ga 1879
Holton Henry C Sidell Ill 1887
Holton Henry D Brandon Vt 1864
Holton Noble Smith Ill 1885
Holton W M New Harmony Ind 1879
Holtzendorff A C Fort Wayne Ind 1887
Homan, George St Louis Mo 1886
Hooper F H Boston Mass 1880
Hooper P O Little Rock Ark 1875
Hoornbeck N B Yorktown Ill 1886
Hoover Charles C Akron Ohio 1886
Hopkins H R Buffalo N Y 1880
Hopkins James A Milton Del 1884
Hopkins John F, Chicago Ill 1878
Hopkins Thomas S Commissville Ga 1879
Hoquenberg Julian F Chicago Ill 1887
Hord W J, U S Navy 1886
Horne S S Jonesboro Ind 1887
Horner, A A Helena Ark 1876
Horner F Marshall 1884
Hornsbrook E Chester Iowa 1885
Horsch Carl H Dover N H 1886
Hosack J P Mercer Pa 1876
Hosmer A B Chicago Ill 1887
Hostetter Peter Omaha Neb 1884
Hotz F C Chicago 1887
Hough George L Northfield Mass 1874
Houghton A S Cincinnati Ohio 1886
Houston J Willis Oxford Pa 1884
Hovey B L Rochester N Y 1878
Howard E W Akron Ohio 1888
Howard Hodoardo Knoxville Md 1884
Howard J W Canyon City Oregon 1885
Howard Noble P Greenfield Ind 1880
Howard Noble P Jr Greenfield Ind 1884
Howard R E Durant Miss 1880
Howard R J Pryorsburg Ky 1875
Howard Wm T Baltimore Md 1870
Howe F A Newburyport Mass 1883
Howell Daniel H Atlanta Ga 1884
Howell Fleming Clarksburg W Va 1885
Hoyt J W Olney Ill 1883
Hoyt W D Rome Ga 1886
Hubbard S T New York N Y 1880
Huber J Pana Ill 1880
Hudson G W Camden Ark 1885
Hudson Salmon Medina Ohio 1874
Huff Alice E Lincoln Neb 1884
Huger Wm H Charleston S C 1884
Hughes A J Latour Ark 1883
Hughes C H St Louis Mo 1880
Hughes D E Williamsport Pa 1887
Hughes H A Phœnix Ari 1885
Hughes J C Keokuk Iowa 1882
Hughes J W Latrobe Pa 1874
Hughes M A Port Clinton Ohio 1880
Hughes Robert Okawville Ill 1887
Hull Amos G New York N Y 1887
Hull M D Arrowsmith Ill 1882
Humiston W H Cleveland Ohio 1883
Humphrey J Wesley Moberly Mo 1873
Humphreys G L Irwin Station Pa 1878
Hun Thomas Albany N Y 1853
Hunlock, E R Hughesville Mo 1886
Hunt A H Wooster Ohio 1883
Hunt C C Dixon Ill 1877
Hunt David Boston Mass 1880
Hunt Ebenezer K Hartford Ct 1860
Hunt J M Wellington Kan 1886
Hunt L C Parkersburg W Va 1878
Hunt Simeon, East Providence R I 1885
Hunter C H, Minneapolis Minn 1884
Hunter C I Springerton Ill 1886
Hunter James B, New York N Y 1878
Hunter, R A, Kansas City, Mo 1886
Hunter, T S Floral Bluff Fla 1883
Huntoon, A E, Girard Kan 1886
Huntsinger H C Pinckneyville Ill 1886
Hurd A Findley Ohio 1874
Hurlbut C F St Louis Mo 1886
Hurlbut Vincent L Chicago Ill 1863
Hurley T W Bentonville Ark 1886
Hurst S T Greenview, Ill 1885
Huselton W S, Allegheny Pa 1872
Husted Nathaniel C Tarrytown N Y 1856
Hutchinson Woods, Des Moines Iowa 1886
Hutchinson W R Enosburg Falls Vt 1877
Hutton T J Fergus Falls Minn 1886
Hyatt B F Ottumwa, Iowa 1886
Hyatt Frank Washington D C 1881
Hyde I E New York N Y 1884
Hyde George S Boston, Mass 1865
Hyde James Nevins Chicago Ill 1877
Hynes G F Van Buren Ark 1886
Hypes B M, St. Louis Mo 1885

Ill Edward J, Newark N J 1887
Ingals E Chicago Ill 1877
Ingals E Fletcher Chicago Ill 1877
Ingels John B Meriden Iowa 1887
Ingersoll D B Mays Landing N J 1884
Ingersoll Ellen A Canton Ill 1878
Ireland M Columbia City Ind 1885
Irish John C Lowell Mass 1878
Irwin Edward H Lodi Wis 1884
Irwin Luther M Lafayette Ind 1884
Irwin Thomas Moberly Mo 1884
Isbell John Washington D C 1886
Ish Milton A Neabsco Mills Va 1884
Isham Ralph N Chicago Ill 1859
Iutzi Joseph Richmond Ind 1878

Jackson A Reeves Chicago Ill 1877
Jackson C O Victor N Y 1884
Jackson Edward Philadelphia Pa 1884
Jackson John H Fall River Mass 1884
Jackson J W Kansas City Mo 1882
Jackson M H Covington Tenn 1885
Jackson Samuel K Norfolk Va 1881
Jackson T B Macon City Mo 1886
Jacobs L D Emporia Kan 1883
Jacobs W C Akron Ohio 1883
Jaggard W W Chicago Ill 1885
Jamison J S Horrellsville N Y 1885
Janes D W Boston Mass 1877
Janes Henry Waterbury Vt 1871
Janeway E G New York N Y 1880
Janney W S Philadelphia Pa 1880
Janvrin J E New York N Y 1880
Jarvis George C Hartford Ct 1872
Jarvis Wm C New York N Y 1881
Jefferson Herbert P Lowell Mass 1884
Jeffery F E Desha Ark 1885
Jelks James T Hot Springs Ark 1882
Jenkins G F Keokuk Iowa 1873
Jenkins George W Kilbourn City Wis 1879
Jenkins John F Tecumseh Mich 1883
Jenkins R H Hogansville Ga 1880
Jenkins W O Terre Haute Ind 1886
Jenk D S Plano Ill 1882
Jenks Edward Watrous Detroit Mich 1863
Jennings Roscoe Greene Little Rock Ark 1869
Jennings R P Delavan Ill 1882
Jennings W H Blossburg Pa 1884
Jepson Samuel L Wheeling W Va 1886
Johnson Charles W Litchfield Ill 1883
Johnson F M Kansas City Mo 1883
Johnson Frank S Chicago Ill 1873
Johnson G K Grand Rapids Mich 1873
Johnson H A Chicago Ill 1873
Johnson H L E Washington D C 1884
Johnson H P Houston Minn 1887
Johnson J E Lebanon Junction Ky 1885
Johnson Jesse W Plattsburg Mo 1885
Johnson Jos Taber Washington D C 1876
John on J P Sioux City Iowa 1882
Johnson John W Boston Mass 1887
Johnson O Worthington Ohio 1883
Johnson S C Hudson Wis 1882
Johnson Thomas M Buffalo N Y 1884
Johnson W M Johnsonville Ill 1896
Johnston Christopher Baltimore Md 1855
Johnston D Westport, Ky 1875
Johnston George Ben Richmond Va 1880
Johnston G W Fairmount Neb 1887
Johnston W W Washington D C 1884
Jones A F Omaha Neb 1887
Jones D W Portsmouth N H 1884

Jones, E W, New Orleans, La 1885
Jones F C, Herndon, Iowa 1887
Jones, Frank S, Medina, Ohio 1883
Jones, George S, Covington, Ind 1887
Jones, G Wheeler, Danville, Ill 1873
Jones, H C, Cerro Gordo, Ill 1887
Jones, H I, Scranton, Pa 1873
Jones, John C, Gonzales, Tex 1885
Jones, J D, Cleveland Ohio 1883
Jones, Joseph New Orleans, La 1885
Jones, J W, Tarboro, N C 1881
Jones, J W, Brightwater, Ark 1885
Jones, Philo O, Red Wing, Minn 1873
Jones, R C, Cincinnati, Ohio 1886
Jones, R E, Gomer, Ohio 1882
Jones Samuel J, Chicago, Ill 1877
Jones, Stanhope New Orleans, La 1885
Jones, Toland, London, Ohio 1883
Jones, T W, Columbus, Ohio 1883
Jones, W T, Georgetown Tex 1885
Jones, W W, Toledo, Ohio 1856
Jordan, J D, Madisonville, Tex 1885
Jordan, J Walter, Black Hawk, Miss 1885
Jordan, R M, St Louis, Mo 1881
Jordan, W A, Clinton, Ky 1887
Jorolemon, Isaac C, Toledo Iowa 1887
Judd, Herbert, Galesburg, Ill 1882
Judd Homer, Upper Alton, Ill 1869
Judkins, Wm Cincinnati, Ohio 1881
Judson, A B, New York, N Y 1876
Judson Champion H, Dobbs' Ferry 1885
Jump, D W, Plainfield, Ill 1883
Jump, Sam V, New Burlington, Ind 1884

Kaiser, Aug, Detroit Mich 1876
Kaster, John P, Burlington, Iowa 1887
Kauffmann Jacob S, Blue Island, Ill 1887
Kay, T W, Columbia, Pa 1883
Kean, Norman L, Northwood, Iowa 1884
Kearns, W D, Pittsburgh, Pa 1885
Kedzie, Robert C, Lansing, Mich 1872
Keegan, George, Stoughton, Wis 1886
Keegan, John T, Louisville Ky 1884
Keene, L S, La Porte, Ind 1878
Kegley Eugene A, Cedar Rapids, Iowa 1884
Keir, Wm F, St Louis Mo 1886
Keith, E H, Peoria, Ill 1887
Keller, James M, Hot Springs, Ark 1859
Kellogg, Helen Reynolds, Chicago, Ill 1887
Kellogg J H, Battle Creek, Mich 1882
Kelly, Hiram R, Galion, Ohio 1884
Kelly, J E, New York N Y 1887
Kelly, Wm D, Galveston, Tex 1885
Kelsey, W J, Cassopolis, Mich 1883
Kempe, J J, Rochester, N Y 1883
Kemper, G W H, Muncie, Ind 1883
Kendall, H W, Quincy, Ill 1872
Kendall, J E, Parkersburg, W Va 1872
Kendig, E V, Haysville, Ohio 1884
Kennedy, N B, Hillsboro, Tex 1885
Kennedy, S D, New Orleans, La 1885
Kenyon, Frank, Scipio N Y 1880
Kenyon, George H Providence, R I 1884
Kerlin, Isaac N, Elwyn, Pa 1865
Kerr, J W, York, Pa 1884
Kersey, Jonathan H, Stuart, Iowa 1883
Ketchum G A, Mobile, Ala 1880
Kewley, J R, Chicago, Ill 1887
Keyser, Peter D Philadelphia, Pa 1870
Kibler, C B Corry, Pa 1876
Kidd, Wm G, Princeton, Iowa 1884
Kidder J H, U S Navy 1881
Kierulff, B F, Los Angeles, Cal 1882
Kilburn, E A, Elgin, Ill 1887
Kilgore, J C, Monmouth, Ill 1882
Killiam James M, Ft Smith, Ark 1886
Kimball, Amy Garrison, Jackson Mich 1878
Kimball H H, Minneapolis, Minn 1886
Kimmel B G, Winfield Iowa 1884
Kindrick, Cyrus, Litchfield Corners, Me 1884
Kindleberger, D, U S Army 1885
King, A F A, Washington D C 1881
King, Cyrus B, Allegheny, Pa 1884
King E H, West Liberty, Iowa 1884
King, Warren R, Philadelphia, Ind 1884
King, Willis P, Sedalia Mo 1884
Kingsley, B F, San Antonio, Tex 1886
Kinloch, R A Charleston, S C 1853
Kinne, A F Ypsilanti, Mich 1887
Kinne, Rufus R Petersburg, Ind 1886
Kinnear, A H, Henry, Ill 1877
Kinney, Elijah C, Norwich Ct 1880
Kirkendall, E E W Burlington, Iowa 1887
Kirker, John, Allegheny Pa 1883
Kirkland, Helen M Upjohn, Kalamazoo, Mich. 1883
Kitchen, Jos L, Kalo Ill 1884
Kitchens, J H, Jonesboro Ark 1885
Kittinger, M G Lockport N Y 1883
Kittrell, Benj, Black Hawk Miss 1875
Kleinschmidt, C H A, Washington, D C 1880
Klingensmith, I P, Blairsville, Pa 1878
Knapp, Chas, Evansville, Ind 1886
Knapp, S O Frankfort Ind 1884
Knapp, W M, Lincoln, Neb 1882
Kneeland, B T, Dalton, N Y 1880
Knight, Amos, Eaton Rapids, Mich 1884
Knight, Mary C, Aurora, Ill 1886
Knight, Philip A, Utica, Mich 1887
Knight, S R, Philadelphia Pa 1881
Knipe, J O, Norristown, Pa 1880
Knott, J M, Sioux City, Iowa 1878
Knox, J Suydam, Chicago Ill 1887
Knox, M D, Hillsboro, Tex 1883
Knox Wm F, McKeesport, Pa 1870
Kolbenberger, Fred, St. Louis, Mo 1886
Kollock, Charles W, Charleston S C 1885
Krieger, G L Madisonville, Ohio 1883
Krise, C W, Carlisle, Pa 1884
Kuhn, Daniel St Louis, Mo 1886
Kurz, C E, Bellaire Ohio 1883
Kyle, Thomas M, Manchester, Ind 1887

La Count David Chilton, Wis 1873
Lacey, Thomas B, Council Bluffs, Iowa 1887
Lacy John M, Santa Ana, Cal 1879
La Force D A, Ottumwa Iowa 1886
Laidley, L H, St. Louis, Mo 1886
Lake, J J, Kenney, Ill 1886
Lamb, J, Aurora, Ind 1886
Lamb, Theodore, Augusta, Ga 1885
Lamphear, S E, Kansas City, Mo 1886
Lampton, W T, Olney, Ill 1886
Lancaster, R A Gainesville, Fla 1885
Landis, Wm H, Woodland, Mich 1887
Landon, N E, Newark, N Y 1885
Landon W M, Golden Ill 1886
Lane, H M Carthage, Nev 1886
Lane, Levi Cooper, San Francisco, Cal 1871
Lane, N S, Lyota Minn 1886
Lane, Samuel G, Chambersburg Pa 1876
Lane, Thomas H, Lebanon, Ind 1887
Lang, James, Marshalltown, Iowa 1882
Langan, D, De Witt, Iowa 1872
Lange J C, Pittsburgh, Pa 1883
Langfitt, W J, Allegheny, Pa 1886
Langlois, T J, Wyandotte, Mich 1874
Langworthy, Owen P, Clinton La 1869
Larimore, F C Mt Vernon, Ohio 1872
Larrabee, John A, Louisville, Ky 1887
Larsh, N B, Nebraska City, Neb 1883
Lash, J W, Chillicothe Ohio 1883
Latham, H W, Latham's Store, Mo 1886
Latham, P H, Weatherly, Pa 1884
Lathrop, Henry K, Royal Oak, Mich 1884
Lathrop, J M, Dover, Ohio 1884
Lathrop, M C, Dover, N H 1881
Latimer Thomas S, Baltimore Md 1884
Laughlin, Charles S, Paris, Ill 1886
Laughton, S, Bangor Me 1876
Lawrason, Geo B New Orleans La 1885
Lawrence, J B New York, N Y 1882
Lawrence W B, Batesville, Ark 1879
Lawson W T, Danville, Ind 1887
Leach, Hamilton E, Washington, D C 1881
Leach, Thomas W, Newmarket, N H 1878
Leadenham, J W Franklin, Pa 1882
Leake, E K, Collierville, Tenn 1886
Leale, C A New York, N Y 1876
Leaman, Brainard, Leaman Place, Pa 1872
Leaman, Henry, Philadelphia, Pa 1872
Leaming, James R New York, N Y 1880
Leaning, John K, Fly Creek N Y 1884
Le Barron, Robert, Pontiac Mich 1887
Ledlie, J H Pittsfield, Ill 1878
Lee, Benjamin, Philadelphia, Pa 1868
Lee, E, St Louis, Mo 1886
Lee, E W Omaha, Neb 1882
Lee, John G, Philadelphia, Pa 1882
Lee, M F, Columbus, Ohio 1883
Lee, Wm, Baltimore, Md 1881
Lee Wm, Washington D C 1866
Leeds L L, Lincoln Ill 1885
Leeper, C C, Catawba, Mo 1885
Legaré, Thomas Charleston S C 1884
Le Grand, C W, Hempstead, Tex 1886
Leigh H G, Petersburg, Va 1881
Leighton, N W, Brooklyn, N Y 1885
Leiper, A K, Coultersville, Ill 1886
Lemmon, S W, Albion Ind 1887
Lemoine, E S St Louis Mo 1886
Lemoyne, F, Pittsburgh Pa 1883
Lenhart W C, Zanesville, Ohio 1883
Lenoir, B B Lenoir s Tenn 1849
Lenow, James H Little Rock Ark 1875
Leonard, B F Baltimore, Md 1884
Leonard, B S, West Liberty, Ohio 1884
Leonard, Hiram O, Kansas City Mo 1887
Leonard, R., Mauch Chunk, Pa 1883
Leonard, R L Chicago Ill 1887
Leonhardt, J S, Seward, Neb 1884
Leslie, C F, Clyde, Kan 1880
Lester, C H, Kansas City, Mo 1886
Lester, G B, Oswego, Ill 1887
Lester, T B, Kansas City, Mo 1872
Letcher James H, Henderson, Ky 1885
Levan, D H, Mt Victory, Ohio 1883
Levan, J R, Philadelphia, Pa 1887
Levick, James J, Philadelphia Pa 1864
Lewellyn, P W, Clarinda, Ohio 1886
Lewis, C G, Ottumwa, Iowa 1882
Lewis, Charles H, Jackson, Mich 1877
Lewis, C J, Chicago Ill 1886
Lewis, D, Hyde Park, Ill 1887
Lewis, Edward R, Crawfordsville Ind 1887
Lewis, Eugene R, Kansas City, Mo 1885
Lewis, E S, New Orleans, La 1885
Lewis, J P, Topeka, Kan 1886
Lichty, Daniel, Rockford, Ill 1873
Lightner S B, Sabina, Ohio 1885
Lincoln N S, Washington, D C 1876
Lincoln W L, Wabashaw, Minn 1882
Linde, Christian, Oshkosh, Wis 1872
Lindley, W T, Hamilton, Mo 1886
Lindsay, Kate, Battle Creek, Mich 1883
Lindsley, C A, New Haven Ct 1884
Lindsley, J Berrien Nashville, Tenn 1851
Lineaweaver, John K, Columbia, Pa 1879
Link, Harvey, Millard Neb 1886
Link, John E Terre Haute Ind 1877
Linn, G A, Monongahela City, Pa 1874
Linn T T, Bourbon, Ind 1883
Linthicum, Daniel A, Helena, Ark 1873
Linvill, D G, Columbia City, Ind 1874
Lippincott, J A, Pittsburgh Pa 1880
Little, John, Bloomington, Ill 1882
Little, J Warren Minneapolis, Minn 1887
Little, Wm R Bloomsburg, N J 1884
Littlefield H H, Beardstown Ill 1875
Livingood, J R, Rossville Ill 1883
Livingston, J B, West Middlesex, Pa 1874
Livingston, T M, Columbia, Pa 1876
Livingston, T R, Plattsmouth, Neb 1887
Lockwood, E H, Medicine Lodge, Ks 1886
Logan, A J, Americus, Ga 1884
Logan, J E, Kansas City, Mo 1886
Logan, Joseph P Atlanta, Ga 1863
Logan, Samuel, New Orleans, La 1885
Lomax, William, Marion, Ind 1850
Lonergan, Wm D, Chicago, Ill 1887
Long, A J Whitehall, N Y 1878
Long, J M Rich Hill, Mo 1886
Longshore, Deborah K, Topeka, Kan 1887
Longshore, W R, Hazleton, Pa 1884
Longstreth, M Fisher, Sharon Hill, Pa 1876
Loomis, E B, Chicago, Ill 1887
Loose, D N Maquoketa, Iowa 1884
Lord, J P, Omaha, Neb 1887
Lothrop, Charles H Lyons, Iowa 1873
Love, I N, St. Louis, Mo 1883
Love, John S, Springville, Iowa 1877
Love, W A Atlanta, Ga 1885
Love Wm S, Winchester, Va 1881
Lovejoy, J W H Washington D C 1881
Loving, Starling Columbus, Ohio 1876
Lower, Melvin O, N Manchester Ind 1886
Lowman John, Johnstown Pa 1853
Lowrie, W L, Mapleton Depot Pa 1884
Lowry, G W, Hastings, Mich 1887
Lowry, O W Grand Junction, Iowa 1887
Loyd, Thos B, Paris, Mo 1886
Lundgren, Carl E St Paul, Minn 1886
Lundy, C J, Detroit Mich 1883
Lukens, C J, New Sharon Iowa 1887
Lusk, William T, New York, N Y 1884
Luten, S W Cayce, Ky 1886
Lutz, F J St Louis, Mo 1886
Lydston, G Frank, Chicago Ill 1886
Lyman, C N, Wadsworth, Ohio 1874
Lyman, E S, Sherburne, N Y 1876
Lynch, John S Baltimore, Md 1876
Lyon, J H, Moingona, Iowa 1887
Lyon, S B, New York, N Y 1886
Lyon, Thomas, Williamsport Pa 1872
Lyster, Henry F Detroit, Mich 1881
Lytle, Geo E, Monongahela City, Pa 1883
Lytle, S S, Iowa City, Iowa 1885

Mabon, John S, Allegheny, Pa 1887
Mabon Thomas Allegheny, Pa 1873
Macfarlane, J W, Pittsburgh, Pa 1885
Macgill, C G W Catonsville Md 1884
Mackall, Louis, Washington, D C 1884
Mackenzie, J N, Baltimore Md 1884
Mackenzie, W R, Chester, Ill 1884
Mackie, J H, New Bedford Mass 1881
Maclean Donald, Detroit Mich 1875
MacQuigg Wm Lyons, Iowa 1882
Mackres, H O, Corry, Pa 1883

Macomber, N G Philadelphia, Pa 1885
Macrae Donald Council Bluffs Iowa 1886
Maddin J W, Jr, Nashville Tenn 1885
Magoffin, John St Louis Mo 1854
Magruder David L, U S A 1873
Magruder G L, Washington D C 1850
Main, Lewis E, *Detroit Mich* 1887
Mains, John F Oakdale Neb 1884
Malone, J A Jacksonville Ill 1886
Mann Charles Nicholasville, Ky 1873
Mann, F W Detroit Mich 1887
Mann J A Wellington Mo 1885
Mansfelde L S von Ashland Neb 1884
Marbourg, E L W, Johnstown Pa 1886
Marcellus T M Sleepy Eye, Minn 1882
Marchand J I Irwin Pa 1883
Marcy Henry O Boston Mass 1876
Markham H C Independence, Iowa 1882
Marks Solon Milwaukee, Wis 1877
Marmion W V Washington, D C 1880
Marr Delos D Chestertown, Ind 1885
Marsh F L, Mt Pleasant Pa 1881
Marsh James P Green Island N Y 1887
Marsh, J T, Liberty Mo 1877
Marshall Jacob A. Nineveh Ind 1887
Marshall, John S Chicago Ill 1882
Marshall N S, Olney, Ill 1878
Marshall S W Sparta Ill 1866
Marshall, Wm Milford Del 1876
Marston D E Monmouth Me 1884
Martin C M Greenville Mich 1883
Martin F H, Chicago Ill 1886
Martin J D Savannah Ga 1880
Martin, R W, Chatham Va 1881
Martin, Samuel M Greenfield Ind 1878
Martin, S C Anna Ill 1887
Martin T A St Louis Mo 1886
Martin T M Dauphin Mo 1885
Martine G R Glenn s Falls N Y 1887
Marvin J B Louisville Ky 1886
Mason, C R *Hartford City Ind* 1882
Mason, Darius Spokane Falls, W T 1876
Mason *John E Washington* D C 1884
Mason Lewis D Brooklyn, N Y 1870
Massey Isaac West Chester Pa 1883
Matas, Randolph New Orleans La 1885
Mathews J M Louisville Ky 1886
Matthews John P Carlinsville Ill 1877
Matthews Luther J Carthage Neb 1886
Maull W C Chicago Ill 1887
Mausteller J D Danville Pa 1880
Maury R B Memphis, Tenn 1886
Maxwell *Allison* Indianapolis Ind 1886
Maxwell F A, Austin Tex 1885
Maxwell T J Keokuk Iowa 1876
Mayer Harold Chicago, Ill 1887
Mayger, John St Louis Mo 1880
Maynard Wm, J Chicago Ill 1887
Mayo, Edward De Kalb Ill 1887
Mayo, W W Rochester Minn 1882
Mays T J Philadelphia, Pa 1876
McAchran J J Laramie Wyoming T 1885
McAllister W L New Sharon Iowa 1886
McAlmont J J, Little Rock Ark 1883
McArdle Thomas E Washington D C 1884
McArthur, D S, La Crosse Wis 1887
McArthur L L Chicago Ill 1885
McAuliffe, E L, Chicago Ill 1886
McBride E H Springfield Mo 1886
McCain J H Mexia Tex 1885
McCandless W A St Louis Mo 1886
McCann James Pittsburgh Pa 1870
McCaskey G W Ft. Wayne Ind 1886
McClain W H Beaman Iowa 1886
McClanahan J P, Alexis Ill 1882
McCleary, H C, Indianola Iowa 1887
McCleary, J D Indianola Iowa 1878
McClellan B R. Xenia Ohio 1887
McClellan Ely U S A 1886
McClelland, Cochran Philadelphia Pa 1882
McClelland R A Yorkville Ill 1887
McCluer Benjamin Dubuque Iowa 1878
McClure, A W Mt. Pleasant Iowa 1882
McClure J, St Louis Mo 1886
McClure, T G Dowds Iowa 1884
McClurg J R West Chester Pa 1876
McColl Hugh Lapeer Mich 1874
McCollum, E J Tiffin, Ohio 1885
McComas J M Sturgeon Mo 1886
McConaughy Robert York Neb 1880
McConnell H S New Brighton, Pa 1882
McConnelly F C Vermillion Ohio 1877
McCord R C Lebanon Ky 1885
McCord, T C Paris Ill 1886
McCorkle G B Covington, Va 1886
McCormack J N Bowling Green Ky 1884
McCormick S C Duluth Minn 1879
McCormick Thomas H Poe, Ind 1887
McCowen, Jennie Davenport Iowa 1882
McCulloch A H Mansfield Ohio 1887
McCulloch, T C, Oil City Pa 1883
McCullough John R, Chicago, Ill 1887
McCully W A, Independence Kan 1887
McCurdy, John Youngstown Ohio 1883
McCurdy S I, Dennison Ohio 1854
McCutcheon P B New Orleans La 1885
McDavitt, T, Winona, Minn 1885
McDavitt Virgil *Quincy Ill* 1881
McDermuth S I, Cowden Ill 1882
McDill, D P, Huntingdon, Pa 1872
McDonald, Edw Martin, Doylestown Wis 1887
McDonald H Cynthiana Ky 1885
McDonald O P Keokuk Iowa 1882
McDonough H H, Vanceville Pa 1883
Mcbbright Thomas Akron Ohio 1867
McElroy, Joseph, Hickory Pa —
McElwee, Sam l Newcastle Ohio 1883
McEwan S W Alexander Minn 1883
McEwen W W, Mound Valley Ks 1886
McFarland, J P *Nashville* Tenn 1883
McGaffigan A J, Carlyle Ill 1887
McGahan Charles F Asheville N C 1887
McGaughey J B Winona Minn 1872
McGavock, F G McGavock Ark 1883
McGee, J A Rice Tex 1885
McGee J P Tuscola Ill 1885
McGehee E L Woodville Miss 1885
McGill J D Jersey City N J 1872
McGowan, H Harrisburg Pa 1886
McGowan Wm D, Lycoming Pa 1884
McGraw Theodore A Detroit Mich 1874
McGuire Hunter Richmond Va 1872
McHatton H Macon Ga 1884
McHench, W J Brighton Mich 1882
McIlvaine T M Peoria Ill 1882
McIntosh T M, Thomasville Ga 1885
McIntyre, C W *New Albany* Ind 1873
McIntyre J H St. Louis Mo 1880
McKay *Reed J Wilmington* Del 1886
McKay, W I Arkansas City Kan 1886
McKee E S Cincinnati Ohio 1885
McKeel P W Wingo, Ky 1887
McKellar A R Green Spring Ohio 1883
McKelvy W H Pittsburgh Pa 1881
McKenna Levi F, Omaha Neb 1885
McKenzie H M, Elwood Iowa 1884
McKie T J Woodlawn S C 1883
McKowen, J C Jackson La 1885
McLaren A St Paul Minn 1887
McLaughlin C C Dunkirk Ohio 1887
McLaughlin James W, Austin Tex 1884
McLean John Pullman Ill 1876
McLean LeRoy Troy N Y 1870
McLeay Donald Prairieville Mich 1883
McLeod S B W New York N Y 1872
McMahan, S W, *Rushville* Ind 1883
McMahan, W R Huntingburg Ind 1875
McMahan W R Mankato Minn 1884
McMann W W Gardner Ill 1874
McMillan P H *Shiloh Hill Ill* 1886
McMillen John W Mt Vernon, Ohio 1886
McMurtry L S Danville Ky 1882
McNary Hugh F Princeton Ky 1875
McNary W H, Martinsville *Ill* 1878
McNeil George W Pittsburgh Pa 1882
McNerney S A Danbury Iowa 1886
McNutt W F San Francisco Cal 1883
McQuesten E F Nashua N H 1881
McShane J T Carmel Ind 1887
McTavish, D Central City Iowa 1887
McVey Richard E Waverly Ill 1864
McVill John R, Milwaukee Wis 1887
McWilliams S A Chicago Ill 1877
McWilliams T B Sigourney Iowa 1887
Meacham Edgar J Washington Iowa 1887
Meachem John G, Racine Wis 1887
Meachem John G, Jr Racine Wis 1887
Mead J A Pearlington Miss 1885
Meals N M Callensburg Pa 1886
Means W H Marionville Mo 1885
Mears George V Fond du Lac Wis 1886
Mears J Ewing, Philadelphia Pa 1882
Meek E Argenta Ark 1886
Meek James A Bunker Hill Ind 1887
Mehler Francis C New London Iowa 1884
Meisenbach A H St Louis Mo 1876
Mendenhall Isaac *New Castle* Ind 1874
Mendenhall W S Manitou Springe Col 1885
Mercer Alfred Syracuse N Y 1886
Mercer F W Chicago Ill 1880
Mercer W M, Pittsfield Mass 1882
Meredith Marion Vinton Iowa 1877
Mergler M J Chicago Ill 1885
Merriam N H Marlboro N H 1886
Merriman H P *Chicago* Ill 1886
Metcalf W A Steelville Mo 1884
Meyer L G Pardoe Pa. 1879
Middlekamp H H Warrenton Mo 1887
Middleton W D *Davenport* Iowa 1882
Miles J D Schuyler Neb 1887
Millard P H *Stillwater Minn* 1883
Miller, A B, Macon, Mo 1886
Miller, A C, Cleveland Ohio 1887
Miller, A J Paris Ill 1877
Miller, A M, Bird in Hand Pa 1882
Miller, *Charles* B, Lawrenceburg Ind 1880
Miller D J Milton Philadelphia Pa 1875
Miller, DeLaskie, *Chicago Ill* 1885
Miller D McL Chicago Ill 1885
Miller, D P, Huntingdon, Pa 1887
Miller, E C, Rockwell Iowa 1872
Miller, E H Liberty Mo 1882
Miller, G W Girard, Ks 1878
Miller Isaac N Mound City Mo 1885
Miller, John Andover, N J 1882
Miller, J H Oconee, Ill 1887
Miller J J, St. Louis Mo 1874
Miller, J L Sheffield, Mass 1886
Miller J P Buckhannon W Va 1885
Miller Joseph S York Pa 1883
Miller N J A New Vienna Iowa 1887
Miller, O L, Allegheny, Pa 1887
Miller R E Chesterton Ind 1887
Miller T J Sedgwick Ks 1872
Miller T W Chicago Ill 1883
Miller W N Pittsburgh Pa 1877
Milligan, F H Wabashaw Minn 1885
Millikin Daniel Hamilton Ohio 1885
Mills Charles S, Richmond Va 1878
Mills D S Pine Bluff, Ark 1852
Mills H R Port Huron Mich 1885
Milner, R H, Chester Pa 1874
Miner A G, Niles Ohio 1872
Miner, D W Ware Mass 1884
Minges, George Dubuque, Iowa 1878
Minich A K *Philadelphia* Pa 1883
Minney, John E Topeka Ks 1884
Minor T T, Seattle, Wash Ty 1886
Mitchell D L Cassville, Mo 1873
Mitchell, E L, *Rosenville Ill* 1885
Mitchell, John H Mt Vernon Ill 1886
Mitchell John W *Superior Neb* 1886
Mitchell, M R Topeka Ks 1884
Mitchell R J Girard, Ill 1885
Mitchell R W Memphis Tenn 1883
Mitchell W F Lancaster Mo 1886
Mixer H M New Hampton Iowa 1879
Moffett, F T Littleton, N H 1886
Moffett, Wm R La Fayette Ind 1826
Monette, George N New Orleans La 1883
Montgomery, Geo Newburyport Mass 1887
Montgomery *John Chambersburg* Pa 1884
Montgomery, H T South Bend Ind 1883
Montgomery *John Chambersburg* Pa 1880
Montgomery, John T Charleston Ill 1887
Montgomery Liston H Chicago Ill 1883
Montgomery W T Chicago Ill 1882
Moody M M Chatham Centre, Ohio 1886
Moon O W Lockport Ill 1883
Mooney F B St Louis Mo 1874
Moor W L Tallahassee Fla 1886
Moore Charles D Des Moines Iowa 1885
Moore David W Waupun Wis 1886
Moore Edward M Rochester N Y 1887
Moore James E Minneapolis Minn 1849
Moore J H, Pittston Pa 1883
Moore J H Perry City Iowa 1884
Moore Jonas Patrick Yazoo City Miss 1886
Moore M T Dunning Ill 1869
Moore, O T New Athens Ill 1887
Moore, Perry G Wabash Ind 1886
Moore, R C Omaha Neb 1883
Moore R E Wytheville Va 1882
Moore Wm New Lisbon, Ohio 1881
Morgan A W DeWitt Iowa 1878
Morgan D Porter, Clarksburg W Va 1886
Morgan E C, Washington D C 1887
Morgan, James E Washington D C 1881
Morgan J M *Spokane Falls Washington Ter* 1873
Morgan W V, Juletta Ind 1884
Morley W B Neillsville Wis 1886
Morrell M P *St Louis* Mo 1885
Morris, J Cheston Philadelphia Pa 1886
Morris, J E Liberty Ind 1881
Morris John Baltimore Md 1876
Morris Jonathan Ironton Ohio 1868
Morris W B, Miami Mo 1878
Morrison J P Chicago Ill 1886
Morrison S J Memphis Tenn 1882
Morrow Calvin J Kansas City Mo 1882
Morrow W F Kirksville Mo 1886
Morse C W Dowagiac Mich 1886
Mortland J C Edgerton Ohio 1882
Morton Thomas Geo Philadelphia Pa 1874
Moses, Gratz A St. Louis Mo 1876
Mosgrove James M Urbana Ohio 1873
Mosgrove S M Urbana Ohio 1887
Mossman B E Greenville Pa 1880
Mott Alex B New York N Y 1874
Mottram C V Lawrence, Ks 1864
Moulton H Stuart Iowa 1873
Mounts James L Morrow Ohio 1886

Mowry, Robert B, Allegheny City, Pa 1850
Mudd, H H, St. Louis, Mo 1873
Mudd, W A, Athens, Ill 1886
Mulhall, J C, St Louis, Mo 1886
Mulheron, J J, Detroit, Mich 1887
Mullen, Alexander J, St Louis, Mo 1850
Munford, S E, Princeton Ind 1884
Munn, J P, New York, N Y 1883
Munson, James D Traverse City, Mich 1878
Murdoch, E P, Chicago, Ill 1887
Murdoch James B, Pittsburgh, Pa 1875
Murdy, W F S Moulton, Iowa 1886
Murfree, J B, Murfreesboro, Tenn 1873
Murphy, Edward, Evansville, Ind 1884
Murphy, Garrett, Garden City, Minn 1884
Murphy, James A, Wilkesbarre Pa 1878
Murphy, John A, Cincinnati, Ohio 1803
Murphy, John B, Chicago, Ill 1887
Murphy, John H St Paul, Minn 1877
Murphy, P I, Washington, D C 1884
Murray, L S, Medina Ohio 1874
Murray, Robert D, U S Mar Hos Ser 1872
Murray, R N, Flint, Mich 1876
Murrell, T E, Little Rock, Ark 1877
Murrill, Henry P Portland, Me 1887
Muscroft, C S, Cincinnati, Ohio 1867
Musser, Charles S Aaronsburg, Pa 1887
Musser, J Henry, Lampeter, Pa 1880
Myers, B, Ashland, Ohio 1883
Myers, Henry K, Lykens Pa 1884
Myers, Isaac A Shelby, Ohio 1884
Myers J C Clinton, Ill 1886
Myers, W H, Ft Wayne, Ind 1883

Nance, Hiram I Creston, Iowa 1884
Nash, Alfred, Joliet, Ill 1872
Nash, H M Norfolk, Va 1879
Neal, W A, Elkhart, Ind 1886
Neely, S F, Leavenworth, Ks 1883
Neff John, Baltimore, Md 1884
Neftel Wm B, New York, N Y 1870
Nelson Daniel T Chicago, Ill 1877
Nelson Samuel N New York City 1884
Nesbitt, Geo W, Sycamore, Ill 1878
Neville, Joseph Omaha Neb 1887
Newcomer, F S, Indianapolis, Ind 1880
Newkirk Charles T Bay City, Mich 1886
Newland Benj, Bedford, Ind 1886
Newman, H P, Chicago Ill 1882
Newman Millard M, Edgewood, Iowa 1887
Newman, Robert New York N Y 1872
Newton, T G, Towanda Pa 1886
Newton J J, Bastrop, La 1885
Neyman A M, Butler, Pa 1883
Nichell Henry, Buffalo, N Y 1863
Nichols, Alva W Greenville, Mich 1883
Nicholls, Stella Blanche, Davenport, Iowa 1886
Nicol, John H Lacona, Iowa 1887
Nicoll, H D, New York N Y 1883
Noble, C M, McLean, Ill 1882
Norred, C H, Lincoln Ill 1882
Norris, A L, Cambridgeport Mass 1876
Norris, F O Eagle Lake, Texas 1885
North, Alfred, Waterbury, Ct 1866
North, E B, Peru, Ind 1887
North, John, Keokuk, Iowa 1877
North, John D, Jackson Mich 1874
North, N L Brooklyn, N Y 1885
Norton, A K, Detroit Minn 1885
Norton, F D, Peterville Ind 1887
Norton, J J Monroe City, Mo 1886
Norton, O D, Cincinnati Ohio 1855
Norton O D, Jr, U S Navy 1883
Nott Thomas H, Goliad, Texas 1884
Nowlin, J B W, Nashville, Tenn 1885
Noxon, D C, Walden N Y 1884
Noyes A A, Mason City, Iowa 1874
Noyes, Henry D, New York, N Y 1864
Noyes, Hiram J, Meigsville Ohio 1876
Noyes James F, Detroit Mich 1873
Nunn, R J, Savannah, Ga 1876
Nutt George D, Williamsport, Pa 1884
Nutting D H, Randolph, Vt 1880
Nye, F T, Beloit, Wis 1887

O'Brien, J N Milwaukee, Wis 1877
O'Connor, J W, Salida Col 1885
Octerlouny John A, Louisville, Ky 1873
O'Daniel, W, Bullard's Station Ga 1879
Odell, Joseph W, Greenland, N H 1884
O'Ferrall, R M, La Fayette Ind 1884
O'Hagan, C J, Greenville N C 1872
Ohage, Justus, St Paul Minn 1887
O'Hara Michael Philadelphia, Pa 1878
Ohmen Dumesnil, A H, St. Louis, Mo 1886
Ohr C H, Cumberland, Md 1868
Oldham, J E, Wichita, Ks 1887
Olinger, O P, South Haven, Ks 1885
O'Neal, J W C, Gettysburg, Pa 1875
O'Neal, Laughlin, Somerset, Ind 1883
O'Neal, Oren, Somerset, Ind 1884
O'Neal, S Eugene, Ottumwa, Iowa 1886
Opie, Thomas, Baltimore, Md 1884
Orcutt, A M, Hardwick Mass 1884
O Reilly P S, U S Army 1873
Orme, H S, Los Angeles, Cal 1882
Orth, H L, Harrisburg, Pa 1877
Orto, Z, Pine Bluffs, Ark 1885
Orton, J G, Binghampton, N Y 1883
Osborn, J A, Cleborne, Tex 1885
Osborn, M C, Delmar, Iowa 1884
Osborne, Harris B, Kalamazoo, Mich 1876
Otillie, Charles, La Crosse, Wis 1884
Otis, F N New York, N Y 1880
Outten, W B, So St Louis, Mo 1873
Overholt, D W, Columbus Junct, Iowa 1876
Overstreet W C, Jr, Sedalia, Mo 1886
Owen, A M, Evansville, Ind 1886
Owen, Frank K Ypsilanti, Mich 1876
Owen, John E, Evansville, Ind 1887
Owens, C D, Eola, La 1885
Owens, J A, Pine Bluff, Ark 1873
Owens John E Chicago, Ill 1877
Oyler, P H, Mt Pulaski, Ill 1885

Pace, J M, Dallas Tex 1884
Packard, John H Philadelphia, Pa 1878
Paddock, F K, Pittsfield, Mass 1880
Page, H R, Des Moines, Iowa 1882
Page, R C M, New York N Y 1881
Paine, C T, Comanche Tex 1885
Paine, J T Y, Galveston Tex 1885
Paine, W M, Aberdeen, Miss 1886
Palmer, A B, Ann Arbor Mich 1875
Palmer, Charles N, Lockport, N Y 1878
Palmer, E A, Hartford, Mich 1883
Palmer, Gideon S, Washington, D C 1854
Palmer, Henry, Janesville Wis 1876
Pancoast, W H, Philadelphia, Pa 1876
Paoli, Gerhardt C, Chicago Ill 1863
Papin T L St Louis, Mo 1886
Parcels, W H, Lewiston Pa 1884
Parham, T W, New Orleans La 1886
Parham, J C, Gainesville, Ala 1885
Park, A V, Chicago, Ill 1886
Park, J Walter, Williamstown Pa 1884
Park, Roswell, Buffalo, N Y 1877
Park, R W, Waco, Tex 1884
Park, W M Indianola Iowa 1880
Parke, Charles R, Bloomington Ill 1887
Parker, Charles B Cleveland Ohio 1887
Parker Chas C, Fayette, Iowa 1884
Parker, Dayton, Blissfield, Mich 1883
Parker, G G Cairo Ill 1886
Parker, Joseph, Colfax, Ind 1886
Parker, M G, Lowell, Mass 1877
Parkes, C I, Chicago, Ill 1882
Parkhurst, F J, Danvers Ill 1887
Parkinson James H, Sacramento Cal 1884
Patchin, Robert A Des Moines Iowa 1883
Parmele, G I, Hartford Ct 1881
Parr, Thomas S, Indianola, Iowa 1879
Parrish, Joseph Burlington N J 1847
Parsons, C H, Rushville Ind 1884
Parsons, Israel, Marcellus N Y 1874
Parsons, John, Kingsbridge, N Y 1880
Parsons, John W, Portsmouth N H 1870
Parsons, Malcolm G, Carbondale, Ill 1887
Parvin, Theophilus, Philadelphia, Pa 1867
Patch, Franklin Fletcher Boston, Mass 1865
Pattee, Asa F, Boston Mass 1884
Patten, F H, National Military Home, Ohio 1884
Patterson, A V, Mansfield Ohio 1880
Patterson, A W, Indianapolis, Ind 1875
Patterson, DeWitt C, Washington, D C 1881
Patterson, Duncan N Mangum, N C 1881
Patterson, J A, Washington, Pa 1884
Patterson, Philo D, Charlotte, Mich 1878
Patterson R J, Batavia, Ill 1876
Pattison, H E, Winamac, Ind 1883
Paulding, O P, San Luis Obispo, Cal 1882
Paul, C S, Paullina, Iowa 1887
Pautzer Hugo O, Indianapolis Ind 1887
Paym, T M, Covington Tenn 1884
Payne, Frank Howard, Berkley, Cal 1887
Payne, Robert H, Richland Iowa 1871
Payton Daniel, Stockton, Cal 1870
Peabody, James H Omaha, Neb 1886
Pearman, F M, Palestine, Ind 1887
Pearman, J T, Champaign, Ill 1875
Pearse, S H, Mt Vernon, Ind 1883
Pearson, Charles D, Indianapolis, Ind 1886
Pearson John S, Louisiana, Mo 1885
Pease, J B, Concordia, Miss 1880
Peck, C W, Brandon, Vt 1884
Peck, George, Elizabeth, N J 1865
Peck W F, Davenport Iowa 1886
Peckinpaugh, Geo R, Mt Vernon, Ind 1885
Peebles, G H, David City, Neb 1885
Peltz, Josiah, Philadelphia Pa 1885
Pendergrass, J B, Jefferson, Ga 1885
Pepper, Wm, Philadelphia, Pa 1872
Percy, James T, Mazeppa, Minn 1887
Perin, G U S Army 1882
Perkins Francis M, Philadelphia, Pa 1887
Perkins, George, Somerset Ky 1875
Perkins, Jabez Owasso Mich 1882
Perkins, Joseph F, Baltimore, Md 1883
Perl, Michael, Houston, Tex 1885
Perry, J G, New York, N Y 1872
Perry, N M, Troupsburg, N Y 1885
Peters, Harrison, Cleveland, Ohio 1883
Phares, D L, Agricultural College, Miss 1885
Phelps, R H, Littleton, Mass 1880
Phelps, Wm C, Buffalo, N Y 1878
Philips, W H, Kenton Ohio 1882
Philler, Hugo, Waukesha, Wis 1887
Phillips, Ellis, New Haven, Pa 1876
Phillips, E L, Galesburg, Ill 1874
Phillips, H H, Vandalia, Mich 1883
Phillips, John, Stevens Point, Wis 1884
Phillips, N D, Gainesville, Fla 1887
Phillips, Thomas H, Canton, Ohio 1883
Phillips, W A, Saline, Ks 1886
Philpot, C H, Albia, Iowa 1887
Philpott, J W, Ft Madison, Iowa 1887
Pickard, P, Mt. Vernon, Ohio 1883
Pickett, Manhattan, Corry, Pa 1880
Pierce, S N, Cedar Falls, Iowa 1885
Pierson, Allen, Spencer, Ind 1887
Pierson Wm, Orange, N J 1876
Pillow, R H, Butler, Pa 1884
Pine, O S, Aberdeen, Dak 1882
Pinkerton, Thomas H, Oakland, Cal 1871
Pinkerton, Wm T, Eau Claire, Wis 1885
Pinkham, G E, Lowell, Mass 1880
Pinney Charles H Derby, Ct 1875
Pipes, J H, Wheeling, W Va 1882
Pitkin, J A, Abilene, Tex 1885
Pitner, Thomas J, Jacksonville, Ill 1872
Pittman, Newson J Tarboro N C 1849
Pixley, Chelius S Elkhart, Ind 1883
Pixley, Sumner, Peninsular, Ohio 1883
Platt, Gideon L Waterbury, Ct. 1848
Pluker, J H, Chicago, Ill 1885
Plumb, E B, Ames, Iowa 1887
Plummer, R H San Francisco, Cal 1885
Plummer, Samuel C, Rock Island, Ill 1873
Plummer S C Jr, Rock Island, Ill 1887
Pocock, Eli D, Shreve, Ohio 1884
Pogue, Joseph Edwardsville, Ill. 1887
Polk John L, Arcola, Ill 1887
Pollak S, St Louis, Mo 1882
Pollman, L P, St Louis Mo 1886
Pollock Alex McCandless, Pittsburgh, Pa 1850
Pollock, W L Heyworth Ill 1882
Pomerene, P P, Berlin, Ohio 1878
Pomeroy, C G Newark N Y 1878
Pontius, Lorin W, Canton, Ohio 1887
Pope, B A, New Orleans, La 1885
Pope, John H, Marshall Tex 1875
Porter, A G, Lebanon, Ind 1877
Porter C L, Bridgeport, Ct 1880
Porter, Miles F Fort Wayne, Ind 1881
Porter, W, St Louis Mo 1882
Porter, Winslow B, Walpole, N H 1884
Porterfield F W, Atlantic, Iowa 1887
Post, M H St Louis, Mo 1886
Potter W W, Buffalo, N Y 1878
Powell Alfred H Baltimore Md 1881
Powell, A M, Collinsville Ill 1886
Powell Chas B, Attica, Iowa 1887
Powell, Edward, Chicago Ill 1886
Powell, H H, Cleveland Ohio 1883
Powell, John T Logansport, Ind 1887
Powell T E Evansville Ind 1887
Powell, T K, Dancyville Tenn 1885
Powell, T O Milledgeville, Ga 1879
Powell, T S, Atlanta, Ga 1876
Powell, W S, Defiance, Ohio 1882
Powers, E M, St Louis, Mo 1886
Powers Milton J, Parkersburg, Iowa 1887
Prather D J, Little Rock Ark 1885
Pratt, Foster, Kalamazoo, Mich 1874
Prentiss, D Webster Washington, D C 1880
Preston, Albert G, Greencastle Ind 1882
Preston, B I, Rochester, N Y 1883
Prewitt T F, St Louis, Mo 1882
Price, A D, Harrodsburg, Ky 1884
Price J L Bergen, Ky 1884
Priestley James T, Des Moines, Iowa 1886
Prince, A E, Jacksonville, Ill 1884
Pritchett, G L Fairbury, Neb 1884
Proctor E G Kane, Ill 1886
Pugh John W, Oaktown Ind 1875
Pugh, Thomas B Napoleonville, La 1885
Purdy, Charles W, Chicago, Ill 1887
Purple, S S, New York, N Y 1884

Purviance S W Crawfordsville Ind 1875
Putnam J M Chelsea Mass 18[illegible]
Putney Wm C Streator Ill 1867
Pyndon Edward, Chicago Ill 1[illegible]0

Quimby Isaac N Jersey City N J 1[illegible]2
Quinn Allen I Wilmington Ohio 18[illegible]

Radcliffe Samuel I Washington D C 1[illegible]
Rahauser George C Louisburgh, Ia 1[illegible]
Rahter C N Harrisburgh Pa 1[illegible]
Raines N F White Haven Tenn 1[illegible]
Ramsey D C Mt Vernon Ind 1[illegible]
Ramsey R W St Thomas Pa 1[illegible]
Randell C H Chicago Ill 1[illegible]
Randolph Robert Chicago Ill 1[illegible]
Rankin D N Allegheny Pa 1[illegible]
Rankin T W Kirkersville Ohio 1[illegible]
Ranney George F Lansing Mich 1874
Ransohoff Joseph Cincinnati Ohio 1[illegible]
Ranson N N South Orange N J 1[illegible]
Ransom H B Burlington Iowa 1[illegible]
Ranson S W Dodge Centre Minn 1[illegible]
Rauch John H Springfield Ill 18[illegible]
Rawlins John W, Washington D C 1[illegible]
Rayson Allen N Cornin Iowa 18[illegible]
Ray J Morrison Louisville Ky 1[illegible]
Ray O N Marmont Ind 1[illegible]
Rea John New Castle Ind 1870
Read N N Norwalk Ohio 1[illegible]
Read C R Middleport Ohio 1[illegible]
Read Ira B New York N Y 1[illegible]
Read Newton S Chandlerville, Ill 1[illegible]
Reagan G I Berwick Pa 1870
Reagin J A Weaverville N C 1[illegible]
Reamy Thaddeus L Cincinnati Ohio 1[illegible]
Reber Charles T Reading Pa 1[illegible]
Reber W M Ploomsburg Pa 1[illegible]
Redden J W Topeka Ks 1[illegible]
Redick S T Allegheny Pa 1886
Redman Spencer Platte City Mo 1[illegible]
Redrow Isaac Williamsburg Ohio 1[illegible]
Reece Madison Abingdon Ill 1874
Reed Andrew B Cedar Rapids Iowa 1880
Reed Boardman Atlantic City N J 1[illegible]
Reed J N E Lancaster Pa 1[illegible]
Reed R G S, Stockton Ohio 1[illegible]
Reed R Harvey Mansfield Ohio 1[illegible]
Reed T A Benkelmann Neb 1[illegible]
Reed T J Massillon Ohio 1[illegible]
Reed W F Ottawa Ohio 1[illegible]
Reese A J Mobile Ala 1[illegible]
Reeser, Howard S Reading Pa 1[illegible]
Reeve James T Appleton Wis 1877
Reeve John C Dayton Ohio 1866
Reeves James E Chattanooga Tenn 1[illegible]
Reeves W W Wills Point Texas 1[illegible]
Reid E M Baltimore Md 1[illegible]
Reid J K Conshohocken Pa 1[illegible]
Remick August Providence R I 1[illegible]
Remick, Oscar F Butler Nev 1[illegible]
Rendleman J J Makanda Ill 1[illegible]
Renfro J C B Fayetteville Tex 1[illegible]
Renner J H La Gro, Ind 1[illegible]
Rennolds H T Baltimore Md 1[illegible]
Reyburn Robert Washington D C 1[illegible]
Reynolds A, Chicago Ill 1[illegible]
Reynolds Albert Clinton, Iowa 1[illegible]
Reynolds Dudley S Louisville, Ky 1[illegible]
Reynolds E M Centreville Iowa 1[illegible]
Reynolds G P Alameda Cal 1[illegible]
Reynolds H J Chicago Ill 1[illegible]
Reynolds J D Creston Iowa 1[illegible]
Reynolds O C, Seward Neb 1[illegible]
Rheinfrank John H Perrysburg Ohio 1[illegible]
Rhodes J E Chicago Ill 1[illegible]
Rice R C Smithland Iowa 1[illegible]
Rice R H Fremont Ohio 1[illegible]
Rich Kendal E Wenona Ill 1[illegible]
Richards Charles H Georgetown Del 1[illegible]
Richards W M Joliet Ill 1[illegible]
Richards W O Waterloo, Iowa 1[illegible]
Richardson A P Walpole N H 1[illegible]
Richardson Edward Louisville Ky 1[illegible]
Richardson E H Cedartown Ga 1[illegible]
Richardson N S Macon Mo 1[illegible]
Richardson Tobias Gibson New Orleans La 1887
Richardson Wm L Montrose Pa 1855
Richey S O Washington D C 1863
Richings H Rockford Ill 1877
Richmond Peter E Mt Pleasant, Mich 1886
Richmond W W Clinton Ky 1887
Rickards W M L Philadelphia Pa 1885
Ricketts E S Portsmouth Ohio 1874
Riddell S S Chippewa Falls Wis 1884
Ridenour Albert W Massillon Ohio 1874
Rigg J E Stoner Pa 1877
Riggen John A Whatcheer Iowa 1883
Rigler, Joel H Kansas City, Mo 1887
Rigle, I S Allegheny Pa 1886
Riggs C S Providence Mo 1876
Ring, Wm, Buffalo N Y 1[illegible]6
Ristine Harley C Ft Dodge Iowa 1[illegible]4
Ristine Henry Cedar Rapids Iowa 1[illegible]3
Ristine J M Cedar Rapids Iowa 1[illegible]7
Ritchey, John N Oil City Pa 1[illegible]7
Ritchie Dirk St Paul Minn 1[illegible]6
Ritchie J C Assumption Ill 1[illegible]7
Roach Paul Quaker Street N Y 1[illegible]6
Roaldes N W de New Orleans La 1[illegible]5
Robb, Wm H, Amsterdam N Y 1[illegible]8
Robbins I H Lincoln Neb 1[illegible]4
Robbins M M Aurora Ill 1[illegible]7
Roberts Dicrin J Nashville Tenn 1[illegible]5
Roberts James D Coldsboro N C 1[illegible]4
Roberts John B Philadelphia Pa 1[illegible]1
Roberts W O Louisville Ky 1[illegible]7
Robertson J B Chicago Ill 1[illegible]5
Robertson N C Dublin Iowa 1[illegible]6
Roberts on J I Wilmington N C 1[illegible]4
Robinson N C St Louis Mo 1[illegible]6
Robinson N R New York N Y 1[illegible]6
Robinson J O West Newton Pa 1[illegible]3
Robinson P C St Louis Mo 1[illegible]5
Robinson S I West Union Iowa 1[illegible]2
Robinson W I, Danville N 1[illegible]4
Robinson W S Taunton Mass 1[illegible]0
Robison James D Wooster Ohio 1[illegible]3
Robison John A Chicago Ill 1[illegible]7
Rockwell P C Aiken S C 1[illegible]0
Rockwood C N Nevada Mo 1[illegible]5
Rodgers John H Springfield Ohio 1[illegible]3
Roe J O Rochester N Y 1[illegible]0
Roeth N Canton Luton Mass 1885
Rodgers C I Ienteville Minn 1[illegible]7
Rogers I N Laporte Ind 18[illegible]2
Rogers H Raymond Durkee N Y 1[illegible]8
Rogers H S Red Oak Iowa 1[illegible]4
Rohe George H Baltimore Md 1[illegible]6
Rohlfing, C G St Louis Mo 1[illegible]6
Rohr C W Rockford Ill 1[illegible]7
Rolfe Benj I Stacyville Iowa 1[illegible]4
Roller I A Idmore Mich 1[illegible]3
Rolph R I Fargo D T 1[illegible]2
Roman Samuel I Conowingo Md 1[illegible]4
Romig Samuel V, Ionia Mich 1[illegible]7
Rook Charles W Quincy Ill 1[illegible]4
Rooker, C N Indianapolis Ind 1[illegible]6
Roome John S Calmar Iowa 1[illegible]4
Rooney Michael Quincy Ill 1[illegible]4
Root, Eliza H Chicago Ill 1[illegible]7
Rose, Gilbert Lester Decatur Mich 1[illegible]1
Rose, I M West Winfield N Y 1[illegible]4
Rose, Landon C Laporte Ind 1853
Rosenthal Isaac M Fort Wayne Ind 1867
Roskoten Robert Peoria Ill 1874
Ross, B F Cobden, Ill 1885
Ross, Frank W Elmira N Y 1885
Ross George W Carrollton Ill 1886
Ross John D Williamsburg Pa 1854
Ross, S M, Altoona, Pa 1882
Rosser John C Brainerd Minn 1882
Rosson J H Vergennes Ill 1886
Rotch F M, Boston Mass 1877
Routh H L, Boonesboro Ark 1875
Rowan E A Wesson Miss 1868
Rowe G H M, Boston Mass 1883
Rowe, John M Charleston Mo 1887
Rowe Mark Redmon Ill 1872
Rowe Samuel B Rolla Nev 1884
Rowland A A, West Plains Mo 1886
Rowland P W Coffeeville Miss 1882
Roy Philip S Washington D C 1887
Rugg D I Hartland Vt 1886
Ruhl Wm D L Sheldon Ind 1882
Rumbold F M, St. Louis Mo 1887
Rumbold, T F St. Louis, Mo 1878
Ruschenberger, W S W Philadelphia Pa 1882
Rushmore J D Brooklyn N Y 1886
Russ Eben J St Mary's Pa 1886
Russell Ira Winchendon Mass 1879
Russell John E Mt Vernon Iowa 1883
Russell L J Heidenhimer Tex 1887
Russell Thomas P Oshkosh Wis 1874
Russell W G Brooklyn N Y 1885
Ruth C E Muscatine Iowa 1886
Rutherford R Houston Tex 1874
Rutherford R S Galena Ind 1885
Rutledge S R Blairsville Pa 1886
Ryburn John S Ottawa Ill 1887

Sabal, E T Jacksonville Fla 1874
Sabin George G Black River N Y 1884
Sabin Marden Centreville Mich 1874
Sacket J W Prairieville Mich 1877
Sager Joseph Celina Ohio 1883
Sale E Paul Aberdeen, Miss 1887
Salisbury A H Minneapolis, Minn 1882
Sanborn J A Plymouth N H 1882
Sanborn Thomas B Newport N H 1884
Sanders A F Hot Springs, Ark 1883
Sanders Charity A, Ottawa Ill 1886
Sanders, Samuel I Good Hope Ill 1875
Sanderson I W Mt Calm, Tex 1885
Sandt John, Easton, Pa 1881
Sansom Jos I Anita Iowa 1885
Saunders Bacon Bonham, Tex 1885
Saunders D D Memphis Tenn 1884
Sawner A J C Libertyville Ill 1887
Sauerhering, Adolf Mayville Wis —
Savage Giles C Nashville Tenn 1875
Savory Charles N Lowell Mass 1877
Sawyer I N Wareham Mass 1873
Sawyer Frank M South Bend Ind 1887
Sawyer John L Centreville Iowa 1887
Sawyer S H Unionville Iowa 1873
Sayre Lewis Albert New York N Y 1848
Sayre Louis H New York N Y 1883
Sayre R H New York N Y 1867
Scarff J H Baltimore Md 1884
Scarff W D Bellefontaine Ohio 1883
Schaberg Herman H, Kalamazoo Mich 1887
Schaefer J C Chicago Ill 18[illegible]
Schaetter Edw M Washington D C 1884
Schantler Edw W Kansas City Mo 1880
Schell Henry S Philadelphia Pa 1884
Schenck W L Osage City Ks 1877
Schermerhorn B Wichita Ks 1883
Schimer Henry Mt Carroll Ill 1887
Schlink F H Delphos Ohio 1883
Schlosstein Adolphus St Louis Mo 1886
Schmid H I White Plains N Y 1880
Schneck J Mt Carmel Ill 1885
Schneider Louis Williamsport Pa 1886
Schoales J D Philadelphia Pa 1882
Schofield Darius Washington Iowa 1887
Schofield John Van Paris City Ind 1887
Schooler Lewis Des Moines Iowa 1887
Schoonover Warren New York N Y 1880
Schurtz Jerry Grand Rapids Mich 1883
Schwartz Edwin Knoxville Ill 1887
Schwenk Peter N K Philadelphia Pa 1885
Scott A C Bladensburg Ohio 1882
Scott N H St Joseph Mo 1887
Scott A J Loudonville Ohio 1881
Scott B B Mt Vernon Ohio 1883
Scott Davidson Topeka Ks 1885
Scott James M St Louis Mo 1873
Scott Preston B Louisville Ky 1886
Scott I A Galva Ill 1886
Scott W, Kokomo Ind 1883
Scott W J Cleveland Ohio 1876
Scott Xenophon C Cleveland Ohio 1874
Scriber W E Blissfield Mich 1883
Scroggs J A Keokuk Iowa 1887
Scudder H Martyn, Chicago Ill 1886
Seaman M W Shipman Ill 1884
Seargent Andrew Hopkinsville Ky 1886
Searle B W Ottumwa Iowa 1882
Sears John H Waco Tex 1881
Sears Mark H Leadville Col 1887
Seay R W Pitcher s Point La 1885
Seeber C W, Higginsville Mo 1886
Seeley O F Chmax Mich 1887
Seeley, T P, Chicago Ill 1883
Seem, A A, Bangor Pa 1884
Seem, A K Martin s Creek Pa 1884
Seiler Carl Philadelphia Pa 1880
Seiler George Alma, Wis 1882
Sell Edward H M, New York N Y 1867
Sellman Wm A B Baltimore, Md 1880
Semple John Wilkinsburg Pa 1880
Senkler A E, St Paul Minn 1886
Senn Nicholas Milwaukee Wis 1873
Severance La Grange Huntingdon Ind 1887
Sexton John Chase Rushville Ind 1887
Sexton Marshall Rushville Ind 1874
Sexton M P New Bloomfield Mo 1886
Seybert F T Council Bluffs Iowa 1886
Seydewitz Paul von, New Orleans La 1885
Seymour W P Troy N Y 1877
Seymour W W Troy N Y 1884
Shackelford J A Leota Landing Miss 1883
Shackelford I J Kosciusko Ind 1887
Shackford C H Chelsea Mass 1880
Shakespeare E O Philadelphia Pa 1884
Shaptaugh S H Princeton Ind 1887
Sharer John P Little Falls N Y 1880
Sharp H J London Ohio 1882
Shaw A B St. Louis, Mo 1886
Shaw E B Osage City Ks 1886
Shaw Thomas W Pittsburgh Pa 1881
Sheadel Wm Thos, Collomsville Pa 1885
Sheaffer A H Lewiston Pa 1881
Shean Wm M Gardner Ks 1880
Shearer James Y, Sinking Springs Pa 1880
Sheldon S B Five Mile Ohio 1883
Sheley O C, Pink Hill, Mo 1886

Shelton, G A, Shelton, Ct 1880
Shenk, John H, Lititz, Pa 1886
Shepard, C, Grand Rapids, Mich 1884
Shepard, E T, New Orleans, La 1885
Shepard, J T, Arkansas City, Ks 1882
Shephard, George R, Hartford, Ct 1881
Shepherd, Geo W, Red Key, Ind 1887
Sheridan, J C, Johnstown, Pa 1883
Sherman, E Amelia, Independence, Ia 1886
Sherman, J A, Cherokee, Iowa 1886
Sherman, John M, Dalton, Iowa 1887
Sherman, O J, Harrison Station, Miss 1885
Sherman, W B Manchester, Iowa 1887
Shibley, J S Paris, Ark 1885
Shields, D Howell, Hannibal, Mo 1885
Shilling, Geo W Sharon, Pa 1884
Shillito, G M, Allegheny, Pa 1879
Shipman, Alfred, Plattsmouth Neb 1884
Shipp, Farinda, Petersburg, Ill 1883
Shively Joseph W Kent, Ohio 1881
Shivers, Offa L, Marion, Ala 1887
Shoemaker, John V, Philadelphia, Pa 1878
Shoemaker, T J, Morganfield, Ky 1875
Shoemaker W P Bradford, Pa 1882
Short, R N Mechanicsburg Pa 1880
Short, W H, La Grange, Ind 1883
Shrader J C, Iowa City, Iowa 1878
Shrady, John, New York, N Y 1880
Shuell Thomas J Parnell Iowa 1887
Shugert, F A Tidioute, Pa 1884
Shull, Calvin Q, Montpelier, Ind 1884
Shulse, Wm H Lebanon, Ind 1875
Shurley Ernest L, Detroit, Mich 1874
Shurtleff, George A, Stockton, Cal 1871
Sidney, A W, Fitchburg, Mass 1881
Sill H Newell, Strawberry Pt., Iowa 1882
Sillman, J E, Erie Pa 1884
Silva, C C P Chicago, Ill 1886
Silver, D R Sidney Ohio 1883
Silver Henry M New York, N Y 1880
Sim, F L, Memphis, Tenn 1884
Simington, R S, Danville, Pa 1885
Simmons, Gustavus L, Sacramento, Cal 1871
Simmons, John F Pine Bluff Ark 1886
Simmons, J K Arch Mills Va 1886
Simons, C J, Chicago Ill 1884
Simons Manning Charleston, S C 1870
Simonton, A C Des Moines Iowa 1884
Simpson, Irwin, Kalamazoo Mich 1887
Simpson, Theo P Beaver Falls Pa 1884
Simpson, W C, New Brighton, Pa 1884
Simpson W R Chillicothe, Mo 1886
Sims Samuel N St. Joseph, Mo 1887
Sinclair, A D, Boston Mass 1885
Sinclair A G, Memphis, Tenn 1885
Sinclair J G, Nashville Tenn 1886
Skeer, J D Chicago Ill 1886
Skinner, D M Belleville, N J 1880
Skinner, S A Hoosac Falls, N Y 1883
Skinner, W M, Anamosa Iowa 1884
Slater, A S, Wataga Ill 1883
Slater Cath B, Aurora Ill 1882
Slayden Campbell Pinewood Tenn 1887
Sloan A B, Kansas City, Mo 1879
Sloan F B, Cowan Tenn 1885
Sloan, John, New Orleans, La 1885
Sloan, Milton Granville Dexter, Iowa 1885
Sloan, W K Moline Ill 1887
Slocum, Charles E, Defiance Ohio 1875
Small, A R, Chicago Ill 1887
Small, A V, Sedalia Mo 1874
Small, E N, Sedalia Mo 1886
Small, J M, Lewiston Me 1880
Small, J W New York N Y 1887
Small, S I, Saginaw, Mich ——
Smart, A R, Toledo Ohio 1879
Smart, Charles, U S Army 1884
Smart, W N, Grand Haven, Mich 1882
Smith, A Kansas City, Mo 1887
Smith, Allan P, Baltimore, Md 1883
Smith, Andrew J, Wabash, Ind 1884
Smith, B F Hillsboro, Tex 1885
Smith, Charles Gilman Chicago Ill 1864
Smith C H Mason City Iowa 1882
Smith, Carter H, Lebanon Ind 1883
Smith, D B, Cleveland, Ohio 1883
Smith, D T Louisville, Ky 1886
Smith, D W Newark N J 1876
Smith, E Burchard Neb 1884
Smith, Eugene Detroit Mich 1873
Smith, E F, Newark N J 1883
Smith, E F, St Louis Mo 1886
Smith, E R, Toledo, Iowa 1886
Smith, Ferdinand, Frankford Mo 1886
Smith, F A, Pleasant Plain Iowa 1887
Smith, Gouverneur M, New York N Y 1858
Smith, G W, Hollidaysburg Pa 1884
Smith, Henry H, Philadelphia, Pa 1876
Smith, Hiram Augusta, Ga 1879
Smith, J E W, Jasper, Fla 1885
Smith, J Lewis, New York, N Y 1880
Smith, Joseph R, U S Army 1874
Smith, Joseph T, Canandaigua N Y 1880
Smith, J W, Charles City, Iowa 1873
Smith, J W, La Grange, Tex 1884
Smith, L A, New Milford, Pa 1885
Smith, Leander B, Fremont, Neb 1885
Smith, Lee, Bloomington, Ill 1882
Smith, M M, Cedar Chapel Tenn 1885
Smith, Q Cincinnatus Austin, Tex 1885
Smith, S Hanbury, New York, N Y 1850
Smith, Stephen, New York N Y 1884
Smith, S W, Newark, N Y 1884
Smith, T H, St. Louis Mo 1886
Smith, Thomas C, Washington, D C 1884
Smith, W, Van Wert, Ohio 1877
Smith, W H, Rushville, Ind 1885
Smolt, C F, Kansas City, Mo 1883
Smouse, D W, Des Moines, Iowa 1883
Smyth, Gonzalva C, Greencastle, Ind 1879
Snively, Andrew J, Hanover Pa 1884
Snively, I N, Waynesboro, Pa 1876
Snively, W, Pittsburgh, Pa 1880
Snook, J M, Kalamazoo Mich 1880
Snow, A P, Winthrop, Me 1876
Snow, Edw S, Dearbornville, Mich 1875
Snowden, John W, Hammonton, N J 1872
Snyder, D J, Scio, Ohio 1886
Snyder, John F, Monroe Center, Ill 1887
Solomon, J C, Perry, Ga 1885
Souchon, Edward, New Orleans, La 1885
Southard, Lott, Newark, N J 1876
Sowers, A H, Denver Col 1884
Sowers, Z F, Washington D C 1884
Spalding S C, Shenandoah, Pa 1880
Spangler, B F, York Pa 1884
Spaulding F A, Detroit, Mich 1884
Speaker W F, Mt Morris Ill 1886
Spear, John C U S Navy 1886
Spear, L E, Shirley, Ill 1886
Spencer, Clark E Ft Gratiot, Mich 1874
Spencer, E V, Mt. Vernon, Ind 1886
Spencer W B, Terre Haute Ind 1887
Spiegelhalter, J, St Louis, Mo 1886
Spilman S A, Ottumwa Iowa 1882
Spitler, Adam Carthage, Ill 1854
Sproul, J S, Warren, Ind 1883
Spurvier, John H Rushville, Ind 1887
Squibb, Edward R Brooklyn, N Y 1860
Sackpole P A Dover N H 1880
Stahley G D Easton, Pa 1880
Stair, I F, Mazo Manie, Wis 1882
Stamm, M, Fremont, Ohio 1883
Stanley, Elwood Sandusky, Ohio 1883
Stanley, F A, Chicago, Ill 1886
Stanley, Z T, Laclede, Mo 1887
Stansbury Emory, Appleton, Wis 1882
Stanton, Byron, Cincinnati, Ohio 1882
Stanton J O, Washington, D C 1881
Staples, Franklin Winona, Minn 1871
Staples, George M, Dubuque, Iowa 1872
Stark Alice M, Ottumwa, Iowa 1886
Starkey H M, Chicago Ill 1887
Starr, G L, Hudson, Ohio 1883
Starr, L E Camden Ala 1885
Staver, A S, Roaring Springs, Pa 1883
Stedman Arnold, Denver Col 1887
Steele, A J St Louis, Mo 1867
Steele, A T, Carleston, Ill 1886
Steele, D A K, Chicago, Ill 1877
Steele, George M Oshkosh Wis 1877
Steele, H K Denver, Col 1883
Steele, Joseph T Hastings Neb 1887
Steen, A H, Cottage Grove Minn 1882
Steer, Justin, St Louis Mo 1886
Stein, Alex W, New York, N Y 1870
Steiner Lewis H, Baltimore Md 1850
Steinmetz, E G, Hokendauqua Pa 1878
Stellwagen Thomas C, Media, Pa 1884
Stephens A H, National Military Home, Ohio 1884
Stephenson Robert Adrian Mich 1876
Sterrett, John P, Pittsburgh, Pa 1886
Steuart, James A Baltimore, Md 1884
Stevens, Geo T, New York, N Y 1881
Stevens, James B, Nashville Tenn 1887
Stevens, M B, Defiance, Ohio 1875
Stevenson, James M, Pittsburgh Pa 1882
Stevenson, Sarah Hackett Chicago Ill 1884
Stewart, A McG Santa Rosa, Cal 1885
Stewart, F E, Wilmington Del 1882
Stewart, Jonas, Anderson Ind 1884
Stewart, J H, Exeter Ill 1886
Stewart, J H, St Paul, Minn 1887
Stewart, J L, Erie Pa 1876
Stewart, Richard B Warren Pa 1884
Stewart, Thos H Church Hill, Ohio 1876
Stewart, W G Newville Pa 1883
Stewart Wm S, Philadelphia Pa 1876
Stick, Wesley G Glenville Pa 1884
Stiles, Geo M, Conshohocken, Pa 1876
Stillé, Alfred, Philadelphia, Pa 1847
Stilliams, D C, Chicago, Mo 1887
Stillman Chas F, New York, N Y 1876
Stilwell, T, Fremont, Ohio 1886
Stinchfield, A W, Eyota Minn 1875
Stinson, J B, Sherman, Texas 1885
Stinson Mary H, Norristown, Pa 1882
Stiver, W B, Lena, Ill 1887
Stockard, C C, Columbia, Miss 1886
Stockman, Geo C, Ft. Atkinson, Wis 1884
Stockton, Frank O, Chicago Ill 1887
Stockwell, Chas Bliss Pt. Huron, Mich 1887
Stockwell, Cyrus M, Port Huron, Mich 1856
Stoffle, R J, St Louis, Mo 1886
Stone, Alex J, St Paul, Minn 1881
Stone, Isaac S, Lincoln, Va 1885
Stone, J J, Argyle, Minn 1877
Stone, M W, Wahoo, Neb 1882
Stone, T M, Jasper, Tex 1885
Storch, A B, Milan, Ohio 1883
Storer Horatio R, Newport, R. I 1878
Stovall, A M, Jasper, Ala 1885
Stowell, J H, Chicago, Ill 1887
Straight A Miner, Bradford, Pa 1883
Strain A J, London, Ohio 1886
Strawbridge, Geo, Philadelphia, Pa 1876
Strawbridge, James D, Danville, Pa 1884
Strickler, A H, Waynesboro, Pa 1884
Strickler, A W, Scottdale, Pa 1884
Strickler, M B, New Bloomfield, Pa 1884
Strong, A B Chicago, Ill 1886
Strong, H W, Byron Centre, Mich 1882
Strong, S E, St Mary's, Mo 1886
Strong, Thomas D, Westfield, N Y 1878
Stubbs, Geo E, Philadelphia, Pa 1884
Suggett, W Le Grand, Flora, Ill 1886
Sullivan, James C, Cairo, Ill 1873
Sullivan, J D, Brooklyn, N Y 1886
Sullivan, Thomas J, Ann Arbor, Mich 1887
Summers, J E, Jr, Omaha, Neb 1887
Summers, Thos O, Jacksonville, Fla 1886
Sutcliffe, J A, Indianapolis, Ind 1884
Swan, S M, Johnston, Pa 1884
Swan, Walter S, Harrisburg, Ill 1887
Swasey, E P, New Britain, Ct 1880
Sweeney, R L, Marion Ohio 1883
Sweetland, W M, Highland Park, Ill. 1885
Sweringen Hiram von, Ft Wayne, Ind 1886
Swetman, J M, Omaha, Neb 1886
Swett, John L, Newport, N H 1864
Swift, L C, Des Moines, Iowa 1886
Swinton Wm J Somerville, N J 1887
Sykes, W H, Plymouth, Ohio 1884

Tadlock, A B, Knoxville, Tenn 1879
Taft, Jonathan, Cincinnati, Ohio 1886
Taft, Wm, Cincinnati, Ohio 1887
Tagert, A H, Chicago, Ill. 1882
Talbot, E S Chicago, Ill 1881
Talley, A N Columbia, S C 1848
Tallman, W L, Mineral Point, Wis 1884
Taneyhill G Lane Baltimore, Md 1884
Taylor, H Genet, Camden, N J 1870
Taylor, Isaac E, New York, N Y 1875
Taylor, James R, New York, N Y 1878
Taylor, J B East Cambridge, Mass 1884
Taylor, J M, Corinth, Miss 1873
Taylor, L H, Wilkesbarre, Pa 1886
Taylor, M A, Austin, Texas 1874
Taylor, M K, U S Army 1885
Taylor, S, Morrison, Ill 1883
Taylor, W A, Booneville, Miss 1879
Taylor, W H, Cincinnati, Ohio 1883
Taylor, W H, Washington D C 1884
Taylor, W W, Memphis Tenn 1886
Teal, Norman Kendallville Ind 1878
Tebo, G H, Mt Sterling, Ill 1883
Tebo, L C, New Orleans, La 1885
Tefft, H K, Topeka, Ks 1886
Tefft, J E, Springfield, Mo 1882
Terhune, A A, Jefferson, Tex 1884
Terrell, F, San Antonio, Tex 1886
Terry, J W Englewood, N J 1887
Thacker, L G, Defiance Ohio 1878
Thatcher, J B, Pisgah, Mo 1886
Thayer Alvin, Erie, Pa 1878
Thayer, F C, Waterville, Me 1884
Thomas, A L, Chicago, Ill 1887
Thomas, D E, Lacon, Ill 1885
Thomas, F S Council Bluffs, Iowa 1886
Thomas, F W Marion Ohio 1883
Thomas, Jas Cary, Baltimore, Md 1880
Thomas, J D, Pittsburgh Pa 1880
Thomas, J P, Pembroke, Ky 1875
Thomas, S C, Milroy Ind 1882
Thomas, T Gaillard New York, N Y 1880
Thomas, Wm B, Fairmount Ind 1887
Thomason, H D, Albion, Mich 1884
Thompson, A A, Flint, Mich 1874
Thompson, A G, Islip, N Y 1872
Thompson, C A, Jefferson City, Mo 1887

Thompson, Frank K Fitchburg, Mass 1884
Thompson, G W Winnamac Ind 1883
Thompson, J Ashley Oshkosh Wis 1887
Thompson J Ford, Washington, D C 1881
Thompson, John H, Kansas City, Mo 1885
Thompson J L, Indianapolis, Ind 1883
Thompson, J G, Lacon, Ill 1883
Thompson, Mary Harris Chicago Ill 1886
Thomp on Samuel I Toledo Iowa 1887
Thomson John A Wrightsville Pa 1876
Thorn S S Toledo Ohio 1883
Thorne Wm Hastings Minn 1880
Thornton G B Memphis Tenn 1877
Thornton John H Lansing Iowa 1887
Thrane, V D H, Eau Claire, Wis. 1880
Tibbets, L Rockford Ill 1880
Tichenor H H Newark N J 1880
Tiffany F B Kansas City, Mo 1884
Tilley Robert Chicago, Ill 1884
Tipton F Selma Ala 1880
Tipton Joseph S, Hillsville Va 1875
Tipton W R Las Vegas, N Mex 1883
Tobias G Jackson Chicago Ill 1887
Tobie E Buffalo N Y 1883
Tobin, Chas P, Pine Bluff Ark 1886
Todd C A St Louis Mo 1886
Todd F Walton Stockton, Cal 1879
Todd, J F Chicago Ill 1880
Todd Jos H Wooster Ohio 1883
Todd L Beecher Lexington, Ky 1886
Todd L L, Indianapolis Ind 1885
Todd S S Kansas City Mo 1873
Toner Jos. Meredith Washington D C 1864
Toombs R S Greenville Miss 1885
Topping Geo W DeWitt, Mich 1872
Towers F E, Minneapolis, Minn. 1880
Towler, J M, Columbia, Tenn 1876
Townsend E H New Lisbon Wis 1857
Townsend G J, So Natick, Mass 1870
Townsend J H Holgate Ohio 1867
Townsend M W, Bergen N Y 1876
Townsend W R So Pittsburg Tenn 1884
Trabert J William Vanville Pa 1884
Trader John W Sedalia, Mo 1873
Traver R D Troy N Y 1883
Traver W H, Providence R I 1885
Treat, J A, Stuart Iowa 1873
Treichler C Galen Honeybrook Pa 1884
Tremaine W S Buffalo N Y 1880
Tressel J H, Alliance Ohio 1873
Trezevant, Geo T Tallulah La 1877
Troth Samuel N Philadelphia Pa 1885
Trout, W A Atwater Ill 1876
Truax Galloway Maquoketa Iowa 1886
Truesdale C Rock Island Ill 1887
Tucker Albert R Cicero Ind 1882
Tucker B St George Colorado Springs Col 1885
Tucker Chester S Coldwater, Mich 1886
Tucker, J C, Oakland Cal 1875
Tucker J H Henderson N C 1882
Tuholske H, St Louis Mo 1887
Tully A M Chicago Ill 1885
Tupper Horace Bay City Mich 1886
Tupper J C Bay City Mich 1875
Tupp r Paul Y St Louis Mo 1882
Turnbull Laurence Philadelphia Pa 1886
Turner S W, Chester Ct 1852
Tweed e J B Weatherly Pa 1880
Twifo d W H Geneva Minn 1883
Twitmyer J H Sharpsville Pa 1883
Tyler C V Bay City Mich 1884
Tyler John H Clinton Ill 1875
Tyner I J Austin Texas 1887
Tyng Anita E Chaseville Fla 1885
Tyree Wm C Kansas City Mo 1887
Tyrrell Gerrard G Sacramento, Cal 1886
Tyson James, Philadelphia Pa 1871
1876

Udell Columbus N Blakesburg Iowa 1885
Udell N, Centerville Iowa 1876
Uhler John R, Baltimore Md 1876
Ulrich Wm B Chester Pa 1875
Underhill J W Cincinnati Ohio 1875
Underwood W J Akron Ohio 1880
Unger D F Mercersburg Pa 1880
Upham E F West Randolph Vt 1884
Uran B F, Kankakee Ill 1887

Vail A M Rock Rapids Iowa 1887
Vail Jonathan B Lima Ohio 1884
VanAntwerp Carter S Vicksburgh Mich 1887
Van Bibber Claude Baltimore Md 1881
Van Bibber W Chew, Baltimore Md 1865
Van Buren E Hooper, Neb 1877
Vance A J Harrison Ark 1885
Vance G E Redding Cal 1882
Van Deman J H Chattanooga Tenn 1874
Vander Lane, John Muskegon, Mich 1887
Van Derveer A, Albany, N Y 1879
Vanderveer John R, Brooklyn, N Y 1878
Van de Warker Lily, Syracuse N Y 1886
Van Eman John H, Kansas City, Mo 1884
Van Eman, W J Leavenworth, Ks 1885
Van Horne A K, Jerseyville, Ill 1873
Van Note I Hamilton Mo 1885
Van Patten, P, Forest City, Ark 1886
Van Velsor, J B, Yankton Dak 1883
Van Velsor, Wm M D Renwick Iowa 1887
Van Voorhis, J S Belle Vernon, Pa 1872
Varian Wm Thusville Pa 1876
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